



SEQUENCE LISTING

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PATRZYKAT, ALEKSANDER

<120> A GENOMIC APPROACH TO IDENTIFICATION OF NOVEL BROAD-SPECTRUM
ANTIMICROBIAL PEPTIDES FROM BONY FISH

<130> 6899-6 LAB

<140> 10/525,126

<141> 2005-02-18

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<150> 60/404,922

<151> 2002-08-22

<160> 362

<170> PatentIn Ver. 3.3

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peptide

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peptide

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His Val Gly Lys Ala Ala Leu Thr His Tyr Leu
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<210> 4
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primer

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primer

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<220>
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<210> 8
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primer

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Tyr Gln Glu Gly Glu Glu
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<210> 29
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<210> 30
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<210> 37
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<400> 37
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<210> 38
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<400> 38
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1 5

<210> 39
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18

<210> 40
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<210> 43
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<400> 43
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<210> 44
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<210> 45
<211> 20
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<400> 45
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<210> 46
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<400> 46
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1 5

<210> 47
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<400> 47
ggagcctcgg tcagcagga

19

<210> 48
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<400> 48
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1 5

<210> 49
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<400> 49
gtgttccatc catcgtc

17

<210> 50
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<400> 50
His Thr Phe Tyr Asn Glu Leu
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<210> 52
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1 5

<210> 53
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<212> DNA
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<400> 53
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<400> 54
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Met Asn Leu Pro Met His
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<400> 57
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<210> 58
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<210> 59
<211> 23
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23

<210> 60
<211> 8
<212> PRT
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<400> 60
Gly Tyr Ala Leu Pro His Ala Ile
1 5

<210> 61
<211> 23
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<213> Salmo salar

<400> 61
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23

<210> 62
<211> 24
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pleurocidin-like peptide

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<400> 62
Gly Lys Gly Arg Trp Leu Glu Arg Ile Gly Lys Ala Gly Gly Ile Ile
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Ile Gly Gly Ala Leu Asp His Leu
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<210> 63
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
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pleurocidin-like peptide

<220>
<223> c-term amidation

<400> 63
Trp Leu Arg Arg Ile Gly Lys Gly Val Lys Ile Ile Gly Gly Ala Ala
1 5 10 15

Leu Asp His Leu
20

<210> 64
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<212> PRT
<213> Artificial Sequence

<220>
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pleurocidin-like peptide

<220>
<223> c-term amidation

<400> 64
Gly Arg Arg Lys Arg Lys Trp Leu Arg Arg Ile Gly Lys Gly Val Lys
1 5 10 15

Ile Ile Gly Gly Ala Ala Leu Asp His Leu
20 25

<210> 65
<211> 25
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<213> Artificial Sequence

<220>
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pleurocidin-like peptide

<220>
<223> c-term amidation

<400> 65
Gly Trp Gly Ser Phe Phe Lys Lys Ala Ala His Val Gly Lys His Val
1 5 10 15

Gly Lys Ala Ala Leu Thr His Tyr Leu
20 25

<210> 66
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<213> Artificial Sequence

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pleurocidin-like peptide

<220>
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<400> 66

Phe Leu Gly Ala Leu Ile Lys Gly Ala Ile His Gly Gly Arg Phe Ile
1 5 10 15

His Gly Met Ile Gln Asn His His
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<210> 67
<211> 25
<212> PRT
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pleurocidin-like peptide

<220>
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<400> 67
Gly Trp Gly Ser Ile Phe Lys His Gly Arg His Ala Ala Lys His Ile
1 5 10 15

Gly His Ala Ala Val Asn His Tyr Leu
20 25

<210> 68
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pleurocidin-like peptide

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Arg Trp Gly Lys Trp Phe Lys Lys Ala Thr His Val Gly Lys His Val
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Gly Lys Ala Ala Leu Thr Ala Tyr Leu
20 25

<210> 69
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pleurocidin-like peptide

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Arg Ser Thr Glu Asp Ile Ile Lys Ser Ile Ser Gly Gly Gly Phe Leu

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5

10

15

Asn Ala Met Asn Ala
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pleurocidin-like peptide

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1 5 10 15

Asn Ala Ala

<210> 71
<211> 19
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<213> Artificial Sequence

<220>
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pleurocidin-like peptide

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1 5 10 15

Pro Arg Ala

<210> 72
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<220>
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pleurocidin-like peptide

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1 5 10 15

Gly Gly Leu Ala Leu Asp His Tyr Leu
20 25

<210> 73
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pleurocidin-like peptide

<220>
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1 5 10 15

Gly Gly Leu Ala Val Asp His Tyr Leu
20 25

<210> 74
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<213> Artificial Sequence

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pleurocidin-like peptide

<220>
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1 5 10 15

Leu Ala Leu Lys His Tyr Leu
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<210> 75
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pleurocidin-like peptide

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1 5 10 15

Ile His Gly Ala Ile Gln Ala His Asn Asp
20 25

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<220>
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pleurocidin-like peptide

<220>
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<400> 76
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1 5 10 15

Leu His Leu His Leu
20

<210> 77
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<220>
<223> c-term amidation

<400> 77
Gly Trp Lys Lys Trp Leu Arg Lys Gly Ala Lys His Leu Gly Gln Ala
1 5 10 15

Ala Ile Lys

<210> 78
<211> 23
<212> PRT
<213> Artificial Sequence

<220>
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pleurocidin-like peptide

<400> 78
Gly Trp Lys Lys Trp Leu Arg Lys Gly Ala Lys His Leu Gly Gln Ala
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Ala Ile Lys Gly Leu Ala Ser
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<210> 79
<211> 18
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<220>
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pleurocidin-like peptide

<400> 79
Gly Trp Lys Lys Trp Phe Thr Lys Gly Glu Arg Leu Ser Gln Arg His
1 5 10 15

Phe Ala

<210> 80
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
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pleurocidin-like peptide

<220>
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<400> 80
Phe Leu Gly Leu Leu Phe His Gly Val His His Val Gly Lys Trp Ile
1 5 10 15

His Gly Leu Ile His Gly His His
20

<210> 81
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
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pleurocidin-like peptide

<400> 81
Gly Phe Leu Gly Ile Leu Phe His Gly Val His His Gly Arg Lys Lys
1 5 10 15

Ala Leu His Met Asn Ser Glu Arg Arg Ser
20 25

<210> 82
<211> 901
<212> DNA
<213> Pleuronectes americanus

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ggaaagggca	ggtggttgga	aaggattggt	aaaggtagag	tcacggaatt	aatttgcttt	180
ttacattgca	aatatttttc	atataacatt	gctggaaaat	cacaaaaata	agtagtcaat	240
atatttggcc	aaatagaatc	actttgattt	caataataat	caaaataaca	acctaaaagg	300
cctttgatta	gcatgttcct	tcaatgaaat	ggacattgta	atttactttg	attctcacat	360
gctacgacct	gctgcagcaa	catttgaaaa	taaatttgtc	ccagaagatt	ttaaagtaca	420
ttgttatagg	cgatttatct	ttctattact	cagatatttg	ttcaaaccac	tagaataact	480
ggatctctat	gctaaaaata	taaaacacac	attcagatgt	tapcagtcaa	gattgaacgc	540
tgtttaaaaag	taagtatgaa	acatcctctg	tatgtataat	tgtttaactg	gtaacttata	600
gtcctaataa	ttgcgttatg	gaaatgtatt	aattgtcatt	taatataatt	tgctggaatt	660
tatcactgtg	tgttttttgt	tgttttttaca	cagctggcgg	gataattatc	ggggggggccc	720
ttgagtaagg	acttctacca	tcattactgt	gtaatatatta	tagttatgat	cagtacagtt	780
attaacaact	tctcttgtct	cgctgaactt	ctccatcagt	cacctcgggc	aggggcaggt	840
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 <213> *Pleuronectes americanus*

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ggggcgggccc	ttgatcacct	cgggcagggg	cagggtgcagg	ggcaggatta	cgactaccag	180
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<210> 84
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 <212> DNA
 <213> *Pleuronectes americanus*

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gaatgaagtt	cactgccacc	ttcctcatga	ttgccatctt	cgctcctcatg	gttgaacctg	180
gagagtgtgg	ctgggggaagc	tttttttaaaa	aggctgctca	cggtagagtc	acagaattaa	240
ttagcttttt	gctttgcaaa	tattttttttt	ataacagctg	gaaaatcaca	aaaataaata	300
gtatatatat	ttggccaata	aaatcacttt	gatttcaata	ataatctaaa	taaccaacct	360
aaaaggcctt	tgattagcat	gttccttcaa	tgaatgttac	gttgagggtt	attttgattc	420
tcacaagcac	caacctgctg	cgtcaacaat	tgaattcaaa	tttgtoocaa	aggaattcaa	480
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ttatgtgitt	tgtttttttt	tacacagttg	gcaagcatgt	tggaaggcg	gcccttacgt	780
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caacttctct	attcctgctg	actctctcca	tccgactcat	ccgcagtcac	taccttggcg	900
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agattttttac	atgtcaaata	atgtagtaga	acatatataa	gtagtcaata	tatttgacca	180
agtagaatca	ttttgatttc	aataataatc	aaaataacaa	tctccaggcg	atttaattatt	240
tgcaataaatt	ggattttata	gaatacggaa	caactggatc	ttaatgctaa	aataatccaa	300
catacattct	gattttgcca	ggcaaaatta	aacactactt	taaagtatgt	ataaaacata	360
atctgtatgt	tataacaaat	actccaagca	attgtgtgat	ggaaatgtat	tcattgtcat	420
ttaatataat	ttgcttgagt	ttatcatctt	gtgtttttgt	ttgttttttc	acagggtggca	480
ggtttatcca	tgggtaagga	cttctacat	catgactgtg	tatttttaatt	attattatca	540
tcagtactgt	tattgacaac	ttcacttgct	tcgctgactc	tctccatcag	aatgatccaa	600
aaccatcacg	gttatgacga	gcagcaggag	ctcaacaagc	gcgcagtcga	tgaa	654

<210> 86

<211> 684

<212> DNA

<213> *Pleuronectes americanus*

<400> 86

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ttctgttttt	tttttgtaga	atgaagttca	ctgccacott	cctcatgatg	ttcatcttcg	180
tcctcatggg	tgaacctgga	gagtgtgggt	ggggaagcat	ttttaagcat	ggtcgtcatg	240
tgaaagtcac	ggaattaatt	agcttttaac	tttgcaaata	ttgttttttt	ttttaacagc	300
tggaacttca	caaaaataaa	tagccgatat	atttggccaa	ttataatcac	tttgatctaa	360
ataacaacct	aaaaggcctt	tgattagcat	gtttcttcaa	taaaatgatt	gaacactact	420
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<210> 87

<211> 826

<212> DNA

<213> *Pleuronectes ferruginea*

<400> 87

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<210> 88

<211> 1300

<212> DNA

<213> *Pleuronectes americanus*

<400> 88

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<210> 89

<211> 3500

<212> DNA

<213> *Pleuronectes americanus*

<400> 89

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<210> 90

<211> 1003

<212> DNA

<213> Hippoglossoides platessoides

<400> 90

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<210> 91

<211> 1007

<212> DNA

<213> Hippoglossoides platessoides

<400> 91

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<210> 92

<211> 999

<212> DNA

<213> Hippoglossoides platessoides

<400> 92

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<211> 179

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 93

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<210> 94

<211> 224

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 94

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<210> 95
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 <212> DNA
 <213> Glyptocephalus cynoglossus

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<210> 96
 <211> 849
 <212> DNA
 <213> Glyptocephalus cynoglossus

<400> 96						
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 <212> DNA
 <213> Hippoglossus hippoglossus

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<210> 98

<211> 690

<212> DNA

<213> Hippoglossus hippoglossus

<400> 98

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ctctctccat	caggatgaac	tcagagcgct	gcagttacga	cgagcggcag	cagcagcagc	660
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<210> 99

<211> 847

<212> DNA

<213> Pleuronectes ferruginea

<400> 99

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<211> 191

<212> DNA

<213> Pleuronectes ferruginea

<400> 100

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gcagtcgatg a 191

<210> 101

<211> 1100

<212> DNA

<213> *Pleuronectes americanus*

<400> 101

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<210> 102

<211> 1300

<212> DNA

<213> *Pleuronectes americanus*

<400> 102

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<210> 103
<211> 824
<212> DNA
<213> Hippoglossus hippoglossus

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gctttttcca ttgcaaatat tttaatatgt catagctgga aaatcacgaa ataagtagtc 180
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<210> 104
<211> 193
<212> DNA
<213> Hippoglossus hippoglossus

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aactcagagc gtcgcagtta cgacgagcgg cagcagcagc agcaggagct cgacaagcgc 180
gcagtcgatg aaa 193

<210> 105
<211> 281
<212> DNA
<213> Hippoglossus hippoglossus

<400> 105
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cgtcacgggg gtcacagggc tcacgggggt cacaggcgtc acgggcgtcg cggttacgac 240
gagcagcagc aggaggagct cgacaagcgc gcattcgatg a 281

<210> 106
<211> 194
<212> DNA
<213> Hippoglossus hippoglossus

<400> 106
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gaactcagag cgtcgcagtt acgacgagcg gcagcagcag cagcaggagc tcgacaagcg 180
cgcagtcgat gaaa 194

<210> 107
<211> 669

<212> DNA

<213> Hippoglossus hippoglossus

<400> 107

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<210> 108

<211> 1006

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 108

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<210> 109

<211> 1007

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 109

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<210> 110

<211> 1007

<212> DNA

<213> Glyptocephalus cynoglossus

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<210> 111

<211> 201

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 111

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aacggtttgg	cctcttgcca	agagcagcaa	gagctcgaca	agcgtcaga	ggatgacgag	180
cccagtgcga	ttgtttttga	a				201

<210> 112

<211> 862

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 112

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<210> 113

<211> 782

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 113

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<210> 114

<211> 185

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 114

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gacgtcgagc	agcaggagct	cgacaagcgc	tcagtggatg	acgagcccag	ttctattgct	180
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<210> 115

<211> 837

<212> DNA

<213> Glyptocephalus cynoglossus

<400> 115

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gcaacaattg	cattcaaat	tgtcccaaag	aaacttaatt	aacattttct	ggcgatttaa	360
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taattaatca	tacattctta	ttttatcagt	caagattgaa	cgctacttaa	aagtatgtat	480
aaaacatcat	ctgtatgtat	aattgtttta	cttttaacta	aaagtcctaa	taattgtgtt	540
atggaaatgt	attaattgtc	atttaatatc	atttcttga	atttatcacc	atgtgttttt	600
gtttgggttt	tacacagctg	gaaggttgat	ccataggtaa	ggacttctac	catcattact	660
gtataatgtt	aataatagca	ttatcatcag	tactgttatt	gataacttct	cttgtctcgc	720
tgactctctc	catcagattc	atcaaacgct	acggtgacgt	cgagcagcag	gagctcgaca	780
agcgctcagt	ggatgacgag	cccagttcta	ttgcttttgc	ctgaagaagt	cgccttg	837

<210> 116
 <211> 748
 <212> DNA
 <213> Glyptocephalus cynoglossus

<400> 116
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 gattttttac tggcaaatat tttagtataa cataccttat gagtagtcga tatatttgac 180
 caagtagaat cattttgact tcaataataa tcaaaataac aatctctagg caatttaata 240
 tttgcattaa ttggatttgt ttttaaaaaat atagaataac tggatcttaa tgctaaaata 300
 attaaacata cattctgata ttaccagtca agattgaacg ctacttaaaa gtatgtataa 360
 aacatcatct gtatgtataa ttgtttaact gtcgactaat agtcctaata attgtgttat 420
 ggaaatgtat tcattgtcat ataatatcat ttgcttgaat ttatcaccat gtgtttttgt 480
 ttgtttttac acagctggaa gggtgatcca taggtaagga cttctacat cattactgta 540
 taattttaag agcattatca tcagtactgt tattgataac ttctcttgct tcgctgactc 600
 tctccatcag actactcggc tttcatcatg ggctcccgg gttctggcac ggtgacgtcg 660
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 gaagaagtcg ccttgaagga gccttcag 748

<210> 117
 <211> 748
 <212> DNA
 <213> Glyptocephalus cynoglossus

<400> 117
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 gactgtatct ttggattgat tgcgactgcg gtccacaatg gtaagtcaag gaattaattc 120
 gattttttact tggcaaatat tttagtataa cataccttat gagtagtcga tatatttgac 180
 caagcagaat cattttgatt tcaataataa tcaaaataac aatctctagg caatttaata 240
 tttgcattaa ttggatttgt ttttaaaaaat atagaataac tggatcttaa tgctaaaata 300
 attaaacata cattctgata ttaccagtca agattgaacg ctacttaaaa gtatgtataa 360
 aacatcatct gtatgtataa ttgtttaact gtcgactaat agtcctaata attgtgttat 420
 ggaaatgtat tcattgtcat ataatatcat ttgcttgaat ttatcaccat gtgtttttgt 480
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 taattttaag agcattatca tcagtactgt tattgataac ttctcttgct tcgctgactc 600
 tctccatcag actactcggc tttcatcatg ggctcccgg gttctggcac ggtgacgtcg 660
 tgcagcagga gctcgacaag cgctcagtgg atgaggagcc cagtgtctatt gtttttgaat 720
 gaagaagtcg ccttgaagga gccttcag 748

<210> 118
 <211> 748
 <212> DNA
 <213> Glyptocephalus cynoglossus

<400> 118
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 gactgtatct ttggattgat tgcgactgcg gtccacaatg gtaagtcaag gaattaattc 120
 gattttttac tggcaaatat tttagtataa cataccttat gagtagtcga tatatttgac 180
 caagtagaat cattttggtt tcaataataa tcaaaataac aatctctagg caatttaata 240
 tttgcattaa ttggatttgt ttttaaaaaat atagaataac tggatcttaa tgctaaaata 300
 attaaacata cattctgata ttaccagtca agattgaacg ctacttaaaa gtatgtataa 360
 aacatcatct gtatgtataa ttgtttaact gtcgactaat agtcctaata attgtgttat 420
 ggaaatgtat tcattgtcat ataatatcat ttgcttgaat ttatcaccat gtgtttttgt 480
 ttgtttttac acagttggaa gggttggtcca tgggtaagga cttctacat cattactgta 540
 taattttaag agcattatca tcagtactgt tattgataac ttctcttgct tcgctgactc 600
 tctccatcag actactcggc tttcatcatg ggctcccag gttctggcac ggtgacgtcg 660
 agcagcagga gctcgacaag cgctcagtgg atgaggagcc cagtgtctatt gtttttgaat 720

<210> 119

<211> 802

<212> DNA

<213> Eopsetta jordani

<400> 119

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atgaagttca ctgccacctt cctcgtgttg ttcattggtca tcgtcatggt tgaacctgga 60
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tgattattac atgccaaata tgtaaatgaa acataccata tgagcagtcg tattatttgg 180
acaagtagaa tcactttgat ttcaatagta attaaaataa caatcaaaaa ggcttttgat 240
tagcatgttc cttcaatgaa atggacattg aggtttattt tgattctcac ctgcatcgac 300
ctgctgcggc aactattgaa atcaaatttg tcccagaaga aactaaatta acatttttcta 360
ggccatctaa tctttgcatg aattggattt gctttcaaaa atatagaata actggatatt 420
tatgctaaaa taataaaaac acacattctg attttaccag tcaagattga aactacttta 480
aaagtacgta taaaacatca tctgtatgta taattgtttg acttttaaca aatagtcaaa 540
atgattgtta tggaaatgca ttaattgtca tttaatatca tttacttgaa tttatcacca 600
tgtgtttgtt tgttttttag caggtggagg ttttctcaat gcgcaaggac tctaccatc 660
attactgtgt aattttaata gtattatcat cagtactcit attgacaacg tctcttgtct 720
cgctgactct ctctatcaga ttaaaccacg ggtatcgcgg ttacgacgag cagcaggagc 780
tcgacaagcg cgcagtcgat ga 802

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<210> 120

<211> 661

<212> DNA

<213> Eopsetta jordani

<400> 120

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atgaagttca ctgccacctt cctgggtgttg tccttggtcg tcctcatggc tgaacctgga 60
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ggcaaataat tttgtataac atatcatatg agcagtcgat gtatttgacc aagaagaatc 180
attttgattt caataataat caaaataaca atctcttgga gattatatat ttgcaataat 240
tggtttttat aaaatataga acaactggat cttaatgcta aaataattaa acatacattc 300
tgattttacc agtcaaaatt aaccactact ttaaagtatg tataaaacat catctgtatg 360
tttaattgtt taacttttaa caaatagtcc aaataattgt gtaatggaaa tgtattcatt 420
gtcatataat atagtttgct tgactttatc accgtgtgtt tttgtttgtt ttttcacagg 480
tgcccaggcg ctccatgggt aaggacttct accatcatga ctgtgtaagt ttaataatat 540
tatcatcagt actgttatta acgacttctc ttgtctcgct gactctctcc atcagaatca 600
tccacaatgc tcgtcacggt tacgacgagc agcaggaact caacaagcgc gcagtcgatg 660
a

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<210> 121

<211> 1011

<212> DNA

<213> Eopsetta jordani

<400> 121

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ccgttttgca aatgtgtcga gcttggttatt gtataataac aaagttaacg atctttattt 120
ttctgttttt ttgtagaatg aagttcactg ccaccttcct gatgttggtc atcttcgtcc 180
tcattggttg acctggagag tgtggttgga aagattggtt tcgtaaggct aagaaaggta 240
gaatcacgga attaatagc tttttacatt gcaaatagat tttttataac agctggaaat 300
cacaaaaata aatagtcgat atatttggcc aattagaatc actttaattt caataataat 360
ctaaataaca acctaaaagg cctttgatta gcatgttcct tcaatgaaaa ggacattgag 420
gtttattttg attctcacat gcaccgacct gtgcggcaac aattgaatto agatttgtcc 480
cagaagaatt caaagtacat ttttccaggc gattaaatct ttccattact cggatttaaa 540
aataaataaa tagaataact gaagcgctat gataaaataa ttacacattc attctgattt 600

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tacaagtcaa	gattgaacac	tattaaaaag	tgtgtataaa	acatcatctg	tatgtataat	660
tgtttaactg	ttaatagtct	taataattgt	gttatggaaa	tgtattaatt	tacatttaatt	720
atcatttgct	tgagtttacc	atcatgtggt	tttgtttggt	tttacacagt	tggaagact	780
gttggcggct	tgcccttaa	gtaagaactt	ctaccatcat	tactgtataa	ttttagatgt	840
attatcacca	gtactgttat	taactacttc	tcttgtctcg	ctgactctct	ccatccgact	900
catccgcagt	cattaccttg	gcgagcagca	ggagcttgcc	aagcgcgcag	tcgatgacga	960
ccccagtgtt	attgtctttg	actgaagaag	tcgccttgaa	ggagccttca	g	1011

<210> 122

<211> 826

<212> DNA

<213> *Pleuronectes vetulus*

<400> 122

atgaagttca	ctgccacctt	cctcatgatt	ttaatcttcg	tcctcatggt	cgaacctgga	60
gagtgtggtg	ttaggaaatg	gtttaaaaag	gctgctcacg	gtaaagtcac	ggaattaatt	120
tgctttttgc	tttacaata	tttttttata	gcagctggaa	aatcacaaaa	ataaatagtc	180
gatgtatttg	gccaataga	atcactttga	tttcaaataa	taatctaaat	agcaacctaa	240
aaggcctttg	attagcatgt	tccttcaatg	aaatggatgt	tgaggtttat	tttgattctc	300
acatgcaccg	acctgctgcg	gcaacaattg	aattcaaatt	tgtcccaaag	gaattcaaag	360
taaacttttc	tagatgattt	aatctttcca	taactcggct	ttgtttttta	aaatatataa	420
taactcaatc	actatgataa	aataataaca	catacttctt	gatttataca	agacaagatt	480
gaaaacttct	taaaagtatg	tataaaacat	catctgtttg	tataattggt	tatcatttca	540
caaaaagtcc	aactaattgt	gttatggaat	tgtataaatt	gtcattttaat	ataatttttt	600
tgagttttatc	aatatgtgtt	tttgtttggt	ttacacagtt	ggcaagggaag	ttggcaagggt	660
ggcccttaag	taaggacttc	taccattatt	actgtataat	tttgatagta	ttatcaccgc	720
tactgttatt	gacaacttct	cttttctctg	tgactctctc	catctgactc	atctgcagtg	780
cttgccctga	caagcagcag	cagctcgaca	agcgcgcagc	cgatga		826

<210> 123

<211> 1017

<212> DNA

<213> *Pleuronectes vetulus*

<400> 123

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tctgtttttt	tttgagaat	gaagttcact	gccaccttcc	tcattgattt	aatcttcgtc	180
ctcatggtcg	aacctggaga	gtgtggtttg	aagaaatggg	ttaaaaaggc	tgttcacggg	240
agagtcacgg	aattaatttg	ctttttgctt	tacaaatatt	tttttatagc	agctggaaaa	300
tcacaaaaat	aaatagtcga	tgtatttggc	caattagaat	cactttgatt	tcaataataa	360
tctaaatagc	aacctaaaaag	gcctttgatt	agcatgttcc	ttcaatgaaa	tggtatgttg	420
ggtttatttt	gattctcaca	tgccaccgacc	tgctgcggca	acaattgaat	tccaatttgt	480
cccaaaggaa	ttcaaagtaa	acttttctag	gcgatttaat	ctttccataa	ctcggctttg	540
tttttaaaaa	tataataata	ctcaatccct	atgataaaat	aataacacat	acattctgat	600
ttataacaaga	caagattgaa	aacttcttga	aagtatgtat	caaacatcat	ctgtttgtat	660
aattgtttta	cagttcacaa	aaagtccaac	taattgtgtt	atggaattgt	ataaattgtc	720
atttaatat	atttttttga	gtttatcaat	atgtgttttt	gtttgtttta	cacagttggc	780
aagaaagttg	gcaagggtgc	ccttaagtaa	ggacttctac	cattattact	gtgtaatttt	840
gatagtatta	tcaccagtac	tgttattgac	aacttctctt	ttcctgtctg	ctctctccat	900
ccgactcatc	tgcatgtgct	accttggcga	gcagcagcag	ctcgacaagc	gtgcagtcga	960
tgaagagccc	agtgttattg	cttttgactg	aagaagtcgc	cttgaaggag	ccttcag	1017

<210> 124

<211> 814

<212> DNA

<213> *Platichthys stellatus*

<400> 124

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gagtgtggtt ggaggaaatg gattaataag gctactcacg gtaaagtcac ggaattaatt 120
cgttttttgc tttgcaaata ttttttttat aacagctgga aagtcacaaa aataaatagt 180
caatatatth ggccaattag aatcaccttg agttcaataa taatctaaat aacaaccaa 240
aaggcctttc ctttaattgaa atgtacgttg aagtttatth tgaatctcac atgcaccgac 300
ctgctgcggc aacaattgaa ttcaaatttc tcccagagga attcaaagta aatttttcta 360
ggcgatttaa tctttccatt actctgattt gtttttaata tatagaatga ctcaattgct 420
atgataaaat aataagccat acattctgat ttttacaaga caagattgaa aacttcttaa 480
aagtacgtat aaaacatcat ctgtatttat aattgtttta catttaacaa attgtcctac 540
taattgtgtt atggaaatgt ataaattgtc atttaatatc atttgcttga gtttatcatt 600
atttgthttt gtttgthttt acacagtttg caagcatatt ggcaaggcgg cccttgagta 660
agaacttcta ccatcattac tgtataatth tgaatagtatt atcaccagta ctgttattga 720
caacttctct tgtcctgatg actctgttca tccaactcat ctgcagtgtc tacattggcg 780
ggaagcaaga actcgacaag cgcgcagtcg atga 814
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<210> 125

<211> 670

<212> DNA

<213> Reinhardtius hippoglossoides

<400> 125

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aatgaaacat acattctgat ttaccagtc aagattgaac gttacttaaa agtatgttta 360
aaacatcatc tgtatgtata attgtttagc tgtaacaaa tagtccaaat aattgtgtta 420
tggaatgta ttaattgtca tataatataa tttgcttgaa tttatcacca tgtgttttg 480
tttgthtttt aacacagctg gaaagtgtat ccattggtaa ggacttctac catcattact 540
gtgtattttt aatagtatta tcatcagtag tgttattaac aacttctctt ctatcgctga 600
ctctctccat cagactcatc catcatggtt acgacgagca gcaggagctc gacaagcgcg 660
cagtcgatga 670
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<210> 126

<211> 813

<212> DNA

<213> Hippoglossus stenolepis

<400> 126

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tttttccatt gcaaatatth taatattgca tagctggaat atcacgaaat aagtagtcga 180
tatattthgc caaatagaat aactthgatt tcaataataa tcaaaattac aatcaaaaag 240
gcctthgatt agcatgttcc ttcaataaaa tggacattga agthttatth gatgctcaca 300
tgcaccgacc tgctgcggca acaattgaaa tcaaatttht ctcaagaattt aaagtacatt 360
tttctaggtg atttaattct tccattcatc tgattthatt tataaatata gaataactgg 420
atctthctgc taaaataata aaacacacat tctgatttht ccagtcaaga ttgaacacta 480
cttaaaagta tgtataaaa atcatctgta tgtataattg tttaactggt aacaatagtc 540
caaataattg tgttaaggaa atgtattaat tctcatttht tatcatttht ttgaatttat 600
caccatgagt tttthgttht tttttacaca ggtagaaaga aggcctthga gtaaggactt 660
ctaccatcat tactthgtaa tttttatagt attatcatca gtactgttat tgacaacttc 720
tctthtctcg ctgactctct ccatcaggat gaactcagag cgtcgcagtt acgacgagta 780
gcagcagaag ctcgacaagc gcgcagtcga tga 813
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<210> 127

<211> 668

<212> DNA
<213> Hippoglossus stenolepis

<400> 127

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cgattttttac atggcaaata ttttaagata acacaccata tgagtagtcg atatatttga 180
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aattaaacat acattctgat ttiaccagtc aagattgaac actacttaga agtatgtata 360
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tggaatgta ttaattgtca ttaatatca tttgcttgaa tttatcacca tgtgtttttg 480
tttgttttta cacagttgga aatttgatcc atgggtaagg acttctacca tcattactgt 540
gtatttttta tagtattatc atcagtactg ttattgacaa cttctcttgt ctgcgtgact 600
ctctccatca gactcatcca tcacggttac gacgagcagc aggagctcga caagcgcgca 660
gtcgatga 668
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<210> 128

<211> 1015

<212> DNA

<213> Pleuronichthys coenosus

<400> 128

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tctgtttttt tttgcagaat gaagttcact gccaccttc tcatgatttt aatcttcgtc 180
ctcatggctg aacctggaga gtgtggtatt aggaaatggg ttaaaaaggc tgctcacggg 240
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ccgactcatc tgcagtgttt accttggcga gcagcagcag ctcgacaagc gtgcagtcga 960
tgaagagccc agtgttattg cttttgactg aaggagtgcg cttgaaggag ctttc 1015
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<210> 129

<211> 1019

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 129

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gcatttgga aacgtgctaa ggttggtact gtataatgca aaattaatga tctttatttt 120
tctgtttttt tttgcagaat gaagttcact gccaccttc tcatgatttt aatcttcgtc 180
ctcatggctg aacctggaga gtgtggtatt aggaaatggg ttaaaaaggc tgctcacggg 240
aaagtcacgg aattaatttg ctttttgctt tacaaaatat ttttttatag cagctggaaa 300
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aggtttattt tgattctcac atgcaccgac ctgctgcggc aacaattgaa ttcaaatttg 480
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tcccaaagga	attcaaagta	aactttttcta	ggcgatttaa	tctttccata	actcgggctt	540
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atttatacaa	gacaagattg	aaaacttctt	gaaagtatgt	atcaaacatc	atctgtttgt	660
ataattgttt	aacatttcac	aaaaagtcac	actagtgtgt	ttatggaatt	gtataaattg	720
tcatttaata	taattttttt	gagtttatca	atatgtgttt	ttgtttgttt	tacacagttg	780
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ttgatagtat	tatcaccagt	actgttattg	acaacttctc	ttttcctgct	gactctctcc	900
atccgactca	tctgcagtgc	ttaccttggc	gagcagcagc	agctcgacaa	gcgtgcagtc	960
gatgaagagc	ccagtgttat	tgcttttgac	tgaagaagtc	gccttgaagg	agccttcag	1019

<210> 130

<211> 832

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 130

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acctgaagaa	gtgtgggttg	aaagaaagt	gtttaaaag	gctactcacg	gtaaagtcac	120
ggaattaatt	agcatttttc	tttgcaaata	ttttttttat	acagctcgaa	aattcacaaa	180
aataaatagt	cgatatattt	ggccaattag	aatcactttg	atttcaataa	taatctaaat	240
aacaacctaa	aaggcctttg	attagcatgt	tccttcaatg	aaatggacgt	tgagggttat	300
attgattctc	acatgcaccg	acctgctgcg	tcaacaattg	aattcaaatt	tgagaggaat	360
tcagcgtaaa	tttttctagg	cgatttaatc	tttccattac	tcggatttgt	ttttaaatat	420
atagaataac	tcaattgcta	tgataaaaata	ataacacata	cattcagatt	tttacaagac	480
aagattgaaa	acttcttaaa	ggtacgtata	aaacatcatc	tgtattttata	attgttttaac	540
atttaacaaa	taatcctact	aattgtgtta	tggaaatgta	taaattgtaa	tttaataata	600
tttgctttag	tttatcatta	tttgtttttg	tttgttttta	cacagttggc	aagcatgttg	660
gcaaggcggc	ccttgagtaa	gaacttctac	catcattact	gtataatttt	gatagtgtta	720
tcaccagtac	tgttattgac	aacttctctt	gtcctgctga	ctctctccat	ccgactcatc	780
cgcagtgttt	acctcggcga	gaagcaagaa	ctcgacaagc	gcgcagtcga	tg	832

<210> 131

<211> 670

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 131

atgaagttca	ctgccacctt	cctggtgttg	ttcatggctg	tcctcatggc	tgaacctgga	60
gagggttttt	tcggattgct	ttttcacggg	atccaccatg	gtagggtcac	ggaattaatt	120
agatgtttac	atggcaaata	ttttaagata	acacaccata	tgagtagtcg	atatatttga	180
ccaattagaa	tcactttaat	ttcaataata	atcacaataa	caatctctag	gccatttaat	240
ctttccatta	atcggatttg	tttttttaaa	tatagaataa	ctggatcttt	atgctaaaaat	300
aatgaaacat	acattctgat	tttaccagtc	aagattgaac	gttacttaaa	agtatgttta	360
aaacatcatc	tgtatgtata	attgttttagc	tgtaaacaaa	tagtccaaat	aattgtgtta	420
tggaaatgta	ttaattgtca	tataatataa	tttgcttgaa	tttatcacca	tgtgtttttg	480
tttggttttt	aacacagctg	gaaagtgtat	ccatgggtta	ggacttctac	catcattact	540
gtgtattttt	aatagtatta	tcatcagtac	tgttattaac	aacttctctt	ctatcgctga	600
ctctctccat	cagactcatc	catcatgggt	acgacgagca	gcaggagctc	gacaagcgcg	660
cagtcgatga						670

<210> 132
<211> 813
<212> DNA
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 132

```
atgaagttca ctgccacctt cctggtggtg ttcattggtcg tcctcatggc tgaacctgga 60
gagggttttg gaaattggat ggggcccat atcagcggta gagtcacgga attaatattgc 120
tttttccatt gcaaataatt taatattgca tagctggaaa atcacgaaat aagtagtcga 180
tatatttggc caaatagaat aactttgatt tcaataataa tcaaaattac aatcaaaaag 240
gcctttgatt agcatgttcc ttcaataaaa tggacattga agtttatttt gatgctcaca 300
tgcaccgacc tgctgcggca acaattgaaa tcaaatttgc ctcagaattt aaagtacatt 360
tttctaggtg atttaattct tccattcatc tgatttattt tataaatata gaataactgg 420
atctttctgc taaaataata aaacacacat tctgatttta ccagtcaaga ttgaacacta 480
cttaaaagta tgtataaaac atcatctgta tgtataattg tttaactgtt aacaatagtc 540
caaataattg tgtaaggaa atgtattaat tgtcatttaa tatcatttgc ttgaatttat 600
caccatgagt tttttgtttg tttttacaca ggtagaaaga aggccttgca gtaaggactt 660
ctaccatcat tactttgtaa tttttatagt attatcatca gtactgttat tgacaacttc 720
tcttgtctcg ctgactctct ccacaggat gaactcagag cgtcgcagtt acgacgagta 780
gcagcagaag ctcgacaagc gcgcagtcga tga 813
```

<210> 133
<211> 668
<212> DNA
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 133

```
atgaagttca ctgccacctt cctggtggtg ttcattggtcg tcctcatggc tgaacctgga 60
gagtggtttt tgggattgct ttttcacggg gtccaccatg gtagggtcac ggaagtaatt 120
cgattttttac atggcaaata ttttaagata acacaccata tgagtagtcg atatatttga 180
tatattagaa tcaatttgat ttcaataata atcaaaaataa caatctctag gcgatttaatt 240
atttgcatta attggatttg tttttaaaaa tatagaataa ctggatcttt atggtaaaat 300
aattaaacat acattctgat tttaccagtc aagattgaac actacttaga agtatgtata 360
aaacatcatc tgtatgtata attgtttaac tgtaaactaa tagtccaaat aattgtgtta 420
tggaatgta ttaattgtca tttaatatca tttgcttgaa tttatcacca tgtgtttttg 480
tttgttttta cacagttgga aatttgatcc atgggtaagg acttctacca tcattactgt 540
gtatttttaa tagtattatc atcagtactg ttattgacaa cttctcttgt ctcgctgact 600
ctctccatca gactcatcca tcacggttac gacgagcagc aggagctcga caagcgcgca 660
gtcgatga 668
```

<210> 134
<211> 1015
<212> DNA
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 134

```
gcccactttg tattcgcaag gtaatatcga tttttttcaa actcatttag acgagaccag 60
```


gcatttg	gga	aacgtg	ctaa	ggttg	gttact	gtataat	gca	aaattaat	ga	tctttat	tttt	120
tctgttt	tttt	tttgc	agaat	gaagtt	cact	gccac	cttcc	tcatgat	ttt	aatctt	cgtc	180
ctcatg	gtcg	aaacct	ggaga	gtgtg	gtatt	aggaa	atggt	ttaaaa	aaggc	tgctc	acggt	240
aaagtc	acgg	aatta	aatttg	cttttt	gtct	tacaa	atatt	ttttt	acagc	agctg	gaaaa	300
tcacaaaa	aat	aatag	tca	tgtatt	gtgc	caatt	agaat	cacttt	gatt	tcaata	aataa	360
tctaaat	agc	aacct	aaaag	gccttt	gatt	agcat	gttcc	ttcaat	gaaa	tgggt	gttga	420
ggtttat	tttt	gatttc	caca	tgcacc	gacc	tgctg	cgcca	acaatt	gaat	tcaa	attgt	480
cccaa	aggaa	ttcaa	agtaa	actttt	ctag	gcgatt	taat	ctttcc	ataa	ctcg	gcttg	540
ttttt	aaaaa	tatata	aataa	ctcaat	cgtc	atgata	aaaat	aataa	acacat	acatt	ctgat	600
ttataca	aga	caagatt	gaa	aacttc	cttga	aagtat	gtat	caaaca	tcat	ctgtt	tatat	660
aattgt	ttta	catttc	acaa	aaagtc	ccaac	taattg	tggt	atgga	attgt	ataaa	attgtc	720
attta	atata	atttttt	tga	gtttat	caat	atgtg	ttttt	gtttg	tttta	cacag	ttggc	780
aagaa	agttg	gcaag	gtgc	cctta	agtaa	gga	cttctac	cattat	tact	gtata	aatttt	840
gatag	tatta	tcacc	agtac	tgttat	tgc	aacttc	tctt	ttcct	gctga	ctctc	tccat	900
ccgact	cac	tgcag	tgc	acctt	ggcga	gcagc	agcag	ctcg	acaagc	gtgc	agtcga	960
tgaag	agccc	agtgt	tattg	ctttt	gactg	aagg	agtcgc	cttga	aggag	ccttc		1015

<210> 135

<211> 557

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 135

cgccctt	aag	atgaag	acat	tcagt	gttgc	agttg	cagtg	gtggt	cgtcc	tcgcat	gtat	60
gttcac	ctct	gaaag	caccg	ctgttc	cttt	ctccg	agggtg	cgaac	ggagg	aggtt	gaaa	120
cattg	acagt	ccagtt	gggg	aacat	caaca	gccgg	ggcggc	acgtcc	atga	atctg	ccggt	180
acgtt	caatt	tagtga	aatga	attaag	taat	tacott	tttagc	aaatta	acat	ctaag	tggt	240
gcgtt	tcacc	cttga	aattg	aattag	ccca	ctagc	gctag	ttgtt	aacca	tttga	ttgtg	300
agccg	gtaga	gaggg	cttca	ggcgag	tag	tgtga	atact	tgtga	agtg	agact	tgga	360
aaaaa	tactt	accat	gtgct	tgttcc	cacc	ttttt	cattt	tctttt	cttg	gctga	gatac	420
agatg	cat	ctt	caggt	tcaag	cgtc	agagcc	accttc	ccct	gtgcc	gttg	tgctg	480
gctgt	cacaa	caagg	gctgt	ggctt	ctgct	gcaa	attctg	aggac	ctgcc	agcaa	agggg	540
gaatt	cgttt	aaa	acac									557

<210> 136

<211> 282

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 136

agatga	agac	attcag	tgtt	gcagtt	gcag	tggtg	gtcgt	cctcg	catgt	atgtt	catcc	60
ttgaa	agcac	cgctg	ttcct	ttctcc	gagg	tgcga	acgga	ggagg	ttgaa	agcatt	gaca	120
gtccag	ttgg	ggaac	atcaa	cagcc	ggg	gcacg	tccat	gaatc	tgccg	atgcatt	tca	180
ggttca	agcg	tcagag	ccac	ctctcc	ctgt	gccgt	tggtg	ctgca	actgc	tg	caca	240
agggc	tgtg	cttct	gctgc	aaatt	ctgag	gacct	gccag	ca				282

<210> 137

<211> 623

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 137

```
acgaggtccc tcacccgctg acaccaaaaag aacaatcaat caactttgga ctggtcttag 60
tgcattgaaa attgtgctgt ggagagcgct gctttttggg aacattgaag agttctgac 120
ttcctcataa actgtcactt caatttcaac tgatttcaac aggactttta aataggctat 180
aaacttccta aaaaaaacga gaatgaaggc ctttagtggt gcagtggtag tcgtcattgc 240
atgtatgttc atccttgaaa gcaccgctgt tcctttctcc gaggtgcgaa cggaggaggt 300
tggaagcttt gacagtccag ttggggaaca tcaacagccg ggcggcgagt ccatgcatct 360
gccggagcct ttcaggttca agcgtcagat ccacctctcc ctgtgcggtt tgtgctgcaa 420
ctgctgtcac aacattggct gtggcttctg ctgcaaattc taagyacctg cccgcaacat 480
tttctagttt gtacatgttt gcaatgtttt ctttctgaga tgttgttttt gtgactatga 540
taatgattta taaaatcact tcttattgtg acactttaaa aaaaataaac acattctttg 600
aatacaaaaa aaaaaaaaaa aaa 623
```

<210> 138

<211> 312

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 138

```
cgaacggagg aggttgaaa cttgacagt ccagttgggg aacatcaaca gccggggcggc 60
acgtccatga atctgccgat gcatttcagg ttcaaacgct agagccacct ctccctgtgc 120
cgttggtgct gcaactgctg tcacaacaag ggctgtggct tctgctgcaa attctgagga 180
cctgccagca ctaaagccat ttatttaact tatcgctttt aatttgcccc tattcttcta 240
tgtttctttt ggactctgtg gagaagatgc aatctcattg acgtctttat cactgcacaa 300
cctcaatctt gt 312
```

<210> 139

<211> 277

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 139

```
aagatgaaga cattcagtgt tgcagtggta cccgtcattg catgtatgtt catccttgaa 60
agcaccgctg ttcttttctc cgaggtgcga acggaggagg ttggaagctt tgacagtcca 120
gttggggaac atcaacagcc ggcgggcacg tccatgaatc tgccgatgca tttcaggctc 180
aagcgtcaga gccacctctc cctgtgccgt tgggtgttca actgctgtca caacaaaggc 240
tgtggcttct gctgcaaatt ctgaggacct gccagca 277
```

<210> 140

<211> 276

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide

sequence for hepcidin-like gene

<400> 140

```
taagatgaag caattcagtg tggcagtggg actcgtcatg gcatgtatgt tcatcgtgga 60
aagcacgct gttcctttct ccgaggtgcg aacggaggag gttggaagct tggacagtcc 120
agttggggaa catcaacagc cgggcggcga gtccatgcat ctgccggagc ctttcaggtt 180
caagcgtcag atccacctct ccctgtgcgg tttgtgctgc aactgctgtc acaacattgg 240
ctgtggcttc tgctgcaaat tctgagactg ccagca 276
```

<210> 141

<211> 647

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 141

```
acgaggcaca cgctgaccag ggggtcacca caacttctga agagacccag gttcctagag 60
agccactaga gaatcaccgg ggagcccga gaacacagga cgctgcgggtg ctcgtcgggtg 120
gccggacacc catgagacag aagacctaca agcctctcag cttcagaagg atttcctgac 180
tcagcatcta aaacctccct caaatgaag gcattcagca ttgcagttgc agtgacactc 240
gtgctgcct ttgtttgcat tcagtgcagc tctgccgtcc cattccaagg ggtgcaggag 300
ctggaggagg ccgggggcaa tgacactcca gttgcggaac atcaagtgat gtcaatggaa 360
tcctggatgg agaatcccac caggcagaag cgccacatca gccacatctc cctgtgccgc 420
tggtgctgca actgctgcaa ggccaacaag ggctgtggct tctgctgcaa gttctgagga 480
ttcccgcaac acaacctcac aatgtattaa tttattacac tttttgtcga gaaatgtcct 540
ttttcttgac ctcttttgta attttgtata atcttttaa taaaacgggg tacgattcat 600
ggaaaaaacc ctttgaataa aataaaaaaa aaaaaaaaaa aaaaaaac 647
```

<210> 142

<211> 521

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 142

```
aagatgaaga cattcagtgt tgcagttgca gtgacaactcg tgctcgctt tgtttgcatt 60
caggacagct ctgccgtccc attccagggg gtaagaacgc aactttaact cgcttcattt 120
gcttattagc cataaatggt ttgtcaggat gctgagacac ggctcctaaa tgtgtataat 180
tcattaacag gtgcaggagc tggaggaggc agggggcaat gacactccag ttgcggcaca 240
tcaaatgatg tcaatggaat cgtggatggt atgttcaatc tgttcaatcg actggatgaa 300
ttaagccaat tactgtgagc gcgttaacat ttaagtggct gtgttccagc ccggtgctgt 360
agggaataaa acccctcggt catgtgtctt gtccgtccac aggagagtcc cgtcaggcag 420
aagcgtcaca tcagccacat ctccatgtgc cgctggtgct gcaactgctg caaggccaag 480
ggctgtggcc cctgctgcaa attctgagga cctgccccagc a 521
```

<210> 143

<211> 543

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide

sequence for hepcidin-like gene

<400> 143

```
aagatgaaga cattcagtgt tgcagtcaca gtggccgtcg tgctcgtctt tatttgatc 60
cagcagagct ctggcacctt tcctgaggta agtcctgac ttcagatcgt ttcattttgc 120
ttgttatcca tgaatctctc atcaacagac tgagacttga ttccttcttt atcaggtaca 180
agagctggag gaggcagtga gcaatgacaa tgcagctgct gaacatcagg agacatcagt 240
ggactcatgg atggtagggt cagttcactg aatggatcaa accaattcac atcagacctt 300
tcagatggaa gtgaatgtgt tttagtctca aaggtgccct gaagctcagt ttacacaagc 360
agtgaaaaca aacacagaaa gttatgatga tgctgatgaa cttctcctca tgtctcatgt 420
ctctcacaca gatgccatac aacagacaga agcgtgcctt caagtgtaaag ttctgctgcg 480
gctgctgcag agctgggtgc tgtggactgt gctgcaagtt ctgaggattc ctgctccaac 540
aac 543
```

<210> 144

<211> 581

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 144

```
acgagctgac aggagctgac aggagtcacc agcagagtca aagaactaaa caacttaact 60
cagtcaaact ctcaaagatg aagacattca gtgttgcaagt cacagtggcc gtcgtcctcg 120
tctttatttg tatccagcag agctctgcct cctttcctga ggcacaagag ctggaggagg 180
cagtgaacaa tgacaatgca gctgctgagc atcaggagac accagtggac tcgtggatga 240
tgccatacaa cagacagaag cgtagcttta agtgtaaagt ctgctgcggc tgctgcagag 300
ctggtgtctg tggactgtgc tgcaagttct gaggattcct gtcacaacaa ccatcaaata 360
ttcatttggt ttgccttttg tcttaaagtt cattgaacta taaacatatt tctgggtgag 420
catgtgatag tttaatgggt ttactcattg gttcatggta tagtcaagtg ttcagagatg 480
tgattgtatc accacatat tttctctggt aggtgtatgt tcaataaatg ccaatgatcc 540
tttgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa a 581
```

<210> 145

<211> 579

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 145

```
acgagcggca cgaggtgaac tgacaggagc tgacaggagt caccagcaga gtcaaagaac 60
taaacaactt aactcagtca aactctcaaa gatgaagaca ttcagtgttg cagtcacagt 120
ggcgcgtcgt ctgctcttta tttgtatcca gcagagctct gcctcctttc ctgaggcaca 180
agagctggag gaggcagtga gcaatgacaa tgcagctgct gaacatcagg agacaccagt 240
tgactcgtgg atgatgcaa acaacagaca gaagcgtggc tttaaagtga agttctgctg 300
cggctgctgc agagctgggt tctgtggact gtgctgcaag ttctgaggat tcctgctcca 360
acaaccatca aatattcatt tgttttgctt tttgttttaa agttcattga actatataca 420
tattttctgg agagcatgtg atagtttaat ggtgctactc cttggttcat ggtgtagtta 480
agtgttcaga gatgtgattg tatcaccac atatttctct gttaaggtgt attttcaata 540
aatgttaatg ctcttttgaa aaaaaaaaaa aaaaaaaaaa 579
```

<210> 146

<211> 477

<212> DNA
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 146

```
acgagactga caggagctga caggagtcac cagcagagtc aaagaactaa acaacttaac 60
tcagtcaaac tctcaaagat gaagacattc agtggtgcag tcacagtggc cgtcgtgctc 120
gtctttatct gtatccagca gagctctgcc acctttcctg agatgccata caacagacag 180
aagcgtggct ttaagtgtaa gttctgctgc ggctgctgcg gagctggtgt ctgtggaatg 240
tgctgcaagt tctgaggatt cctgctccaa caaccatcaa atattcattt gttttgcctt 300
ttgtcttaaa gttcattgaa ctataaacat atttctgggt gagcatgtga tagtttaatg 360
gtgttactca ttggttcatt gtatagtcaa gtgttcagag atgtgattgt atcaccacac 420
tattttctct gttaggtgta ttttcaataa atgccaatga tcctttgaaa aaaaaaaa 477
```

<210> 147

<211> 483

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 147

```
aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt tatttgatcc 60
cagcagagct ctgcctcctt tcctgaggtg agcaactgac ttcagatcgt ttcatttgct 120
tgttatccat gaatctctca tcatcatact gagacttgat tccttcttta tcaggcacia 180
gagctggagg aggcaagtga caatgacaat gcagctgctg agcatcagga gacaccagtg 240
gactccagga gtgaatgtgt tttagtcaca aaagtgcctt gaagctcagt ttacacaagc 300
agagaaaaca aacagagtaa gttatgatga tgctgatgaa ggtctcctca tgtctcatgt 360
ctctcacaca gattccatac aacagacaga agcgtagctt taagtgtgag ttctgctgcg 420
gctgctgcag agctgggtgtc tgtggactgt gctgcaagtt ctgaggattc ctgctccaac 480
aac 483
```

<210> 148

<211> 542

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 148

```
agatgaagac atgcagtgtt gcagtcacag tggccgctgt gctcgtcttt atttgatacc 60
agcagagctc tgcctccttt cctgaggtaa gcacctgact tcagatcgtt tcatttgctt 120
gttatccatg aatctctcat catcatactg agacttgatt ccttctttat caggtacaag 180
agctggaggg ggcagtgagc aatgacaatg cagctgctga acatcaggag acaccagttg 240
actcgtggat ggtaggttca gttcactgaa tggatcaatc catttcacat cagatctttc 300
agatggaagt gaatgtgttt tagtcacaaa agtgccctg aagctcagtt tacacaagca 360
gagaaaacaa acagagtaag ttatgatgat gctgatgaag gtctcctcat gtctcatgtc 420
tctcacacag atgcaaaca acagacagaa gcgtggcttt aagtgtgagt tctgctgcgg 480
ctgctgcaga gctggtgtct gtggactgtg ctgcaagttc tgaggattcc tgctccggac 540
aa 542
```

<210> 149
<211> 536
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 149
aagatgaaga caatcagtggt tgcagtcaca gtggcgcgtcg tcctcgtctt tatttgatc 60
cagcagagct ctgcctcctt tcctgaggta agcacctgac ttcagatcgt ttaatttgct 120
tggtatccat gaatctctca tcaacatact gagacttgat tccttcttta tcaggcacia 180
gagctggagg aggcagtgag caatgacaat gcagctgctg agcatcagga gacaccagt 240
gactcaggga tggtaggttc agttcactga atggatcaat ccatttcaca tcagatcttt 300
cagattgaag tgaatgtgtt ttagtcacaa aagtgcctcg aagctcagtt tacacaagca 360
gagaaaacaa acagagtaag ttatgatgat gctgatgaag gtctcctcat gtctcatgtc 420
tctcacacag attccataca acagacagaa gcgtagcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga gctggtgtct gtggactgtg ctgcaaattc tgaggacctg ccagca 536

<210> 150
<211> 536
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 150
aagatgaaga cattcagtggt tgcagtcaca gtggcgcgtcg tgctcgtctt tatttgatc 60
cagcagagct ctgcctcctt tcctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tggtatccat gaatctctca tcatcatact gagacttgat tccttcttta tcaggtaaa 180
gagctggagg aggcagtgag caatgacaat gcagctgctg aacatcagga gacaccagt 240
gactcgtgga tggtaggttc agttcactga atggatcaat ccatttcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgcctcg aagctcagtt tacacaagca 360
gagaaaacaa acagagtaag ttatgatgat gctgatgaag gtctcctcat gtctcatgtc 420
tctcacacag atgccaaaca acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga gctggtgtct gtggactgtg ctgcaaattc tgaggacctg ccagca 536

<210> 151
<211> 542
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 151
aagatgaaga catcagtggt tgcagtcaca gtggcgcgtcg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tcctgaggta agcacctgac ttcagatagc ttcatttgct 120
tggtatccat gaatctctca tcaacatact gagactttat tccttcttta tcaggtaaa 180
gagctggagg aggcagtgag caatgacaat gcagctgctg cgcacagga gacatcagt 240
gactcgtgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag cgaatgtgtt ttagtcaaaa aagtgcctcg atgctcagtt tacacaagca 360
gagaaaacaa gcagagtaag ttatgatgat gctgatgaac gtgtcctcat gtctcatgtc 420
tctcacacag atgccataca acagaccgaa gcgtagcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga gctggtgtct gtggactgtg ctgcaaattc tgaggattcc tgctccaaca 540

<210> 152

<211> 542

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 152

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aagatgaaga cattcagtgt ggcagtcaca gtggccgctg tgctcgtctt tatttgtatc 60
cagcagagct ctgccacctt tcctgaggta agcacctgac ttcagatagc ttcatttgct 120
tgttatccat gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtacaa 180
gagctggagg aggcagttag caatgacaat gcagccgctg aacatcagga gacatcagtg 240
gactcgtgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacag aagtgcctg atgctcagtt tacacaagca 360
gagaaaacaa gcagagtaag ttatgatgat gctgatgaac gtgtcctcat gtctcatgtc 420
tctcacacag atgccatata acagaccgaa gcgtagcttt aagtgttaagt tctgctgcgg 480
ctgctgtaga gctggtgtct gtggactgtg ctgcaaattc tgaggattcc tgctccaaca 540
ac 542

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<210> 153

<211> 542

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 153

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aagatgaaga cattcgtggt tgcagtcaca gtggccgctg tgctcgtctt tatttgtatc 60
cagcagagct ctgccacctt tcctgaggta agcacctgac ttcagatagc ttcatttgct 120
tgttatccat gaatctctca tcaacatact gagacttgat tccttcttta tcaggtacaa 180
gagctggagg aggcagttag caatgacaat gcagccgctg aacatcagga gacatcagtg 240
gactcgtgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgactgtgtt ttagtcacaa aagtgcctg atgctcagtt tacacaagca 360
gagaaaacaa gcagagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
tctcacacag atgccatata acagacagaa gcgtagcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga gctggtgtct gtggactgtg ctgcaaattc tgaggattcc tgctccaaca 540
ac 542

```

<210> 154

<211> 533

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 154

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aagatgaaga catcagtggg tgcagtcaca gtggccgctg tgctcgtctt tatttgtatc 60
cagcagagct ctgccacctt tcctgaggta agcacctgac ttcagatagc ttcatttgct 120
tgttatccat gaatctctca tcaacatact gagactttat tccttcttta tcaggtacaa 180
gagctggagg aggcagttag caatgacaat gcagctgctg cacatcagga gacatcagtg 240

```

```

gactcgtgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatgaagt gactgtgttt tagtcacaaa agtgcctga tgctcagttt acacaagcag 360
agaacaacag cagagtaagt tatgatgatg ctgatgaacg tgcctcatg tctcatgtct 420
ctcacacaga tgccatacaa cagacataag cgtagcttta agtgtaagtt ctgctgcggc 480
tgctgcagag ctggtgtctg tggactgtgc tgcaaattct gaggattcct gct 533

```

<210> 155

<211> 541

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 155

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aagataagac attcagtgtt gcagtcacag tggccgtcgt gctcgtcttt atttgtatcc 60
agcagagctc tgccaccttt cctgaggtaa gcacctgact tcagatcgtt tcatttgctt 120
gttagccttg aatctctcat caacatactg agacttgatt tcttctttat caggtacaag 180
agctggagga ggcagtgagc aatgacaatg cagctgctga acatcaggag acatcagtgg 240
acttgtggat ggtaggttca gttcactgaa tggatcaaac caattcacat cagatctttc 300
agatggaagt gaatgtgttt tagtcacaaa agtgcctga agctcagttt acacgagcag 360
agaaaaccaa cacagtaagt tatgatgatg ctgatgaacg tctcctcatg tctcatgtct 420
ctcacacaga tgccatacaa cagacagaag cgtggcttta agtgtaagtt ctgctgcggc 480
tgctgcagcc ctggtgtctg tggactttgc tgcagattct gaggattcct gctccaacaa 541
c

```

<210> 156

<211> 536

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 156

```

aagatgaaga cattcagtgt tgcagtcgca gtggccgtcg tgctcatctt tatttgtatc 60
cagcagagct ctgccacctt tcctgaggtg agcacctgac ttcagatagt ttcatttgct 120
tgttatccat gaatctctca tcaacatact gagactttat tcttcttta tcaggtacaa 180
gagctggagg aggcagtgag caatgacaat gcagctgctg aacatcagga gacatcattg 240
gactcatgga tggtaggttc agttcactca atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgactgtgtt ttagtcacaa aagtgcctg atgctcagtt tacacaagca 360
gagaaaacaa gcagagtaag ttatgatgat gctgatgaac gtgtcctcat gtctcatgtc 420
tctcacacag atgccataca acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga gctggtgtct gtggactgtg ctgcaaattc tgaggacctg ccagca 536

```

<210> 157

<211> 536

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 157

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aagatgaaga cattcagtgt tgcagtcaca gtggccgtcg tgctcgtctt tatttgtatc 60

```


cagcagagct	ctgccacctt	tcctgaggtg	agcacctgac	ttcagatagt	ttcatttgct	120
tgttatccat	gaatctctca	tcaacatact	gagactttat	tccttcttta	tcaggtacaa	180
gagctggagg	aggcagttag	caatgacaat	gcagctgctg	aacatcagga	gacatcattg	240
gactcatgga	tggtagggtc	agttcactca	atggatcaaa	ccaattcaca	tcagatcttt	300
cagatggaag	tgaatgtgtt	ttagtcacaa	aaagtccctg	atgctcagtt	tacacaagca	360
gagaaaacaa	gcagagtaag	ttatgatgat	gctgatgaac	gtgtcctcat	gtctcatgtc	420
tctcacacag	atgccatata	acagacataa	gcgtagcttt	aagtgttaagt	tctgctgcgg	480
ctgctgcaga	gctggtgtct	gtggactgtg	ctgcaaattc	tgaggacctg	ccagca	536

<210> 158

<211> 535

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 158

agatgaagac	attcagtggt	gcagtcacag	tggccgctcg	gctcgtcttt	atttgtatcc	60
agcagagctc	tgccaccttt	cctgaggtaa	gcacctgact	tcagatagtt	tcatttgctt	120
gttatccatg	aatctctcat	caacatactg	agacttgatt	tccttcttat	caggtacaa	180
agctggggga	ggcagtgagc	aatgacaatg	cagccgctga	acatcaggag	acatcagtg	240
actcgtggat	ggtaggttca	gttcactcaa	tggatcaaac	caattcacat	cagatctttc	300
agatggaagt	gaatgtgttt	tagtcacaaa	agtgccctga	tgctcagttt	acacaagcag	360
agaaaacaag	cagagtaagt	tatgatgatg	ctgatgaacg	tgctcctcat	tctcatgtct	420
ctcacacaga	tgccatacaa	cagaccgaag	cgtagcttta	agtgttaagt	ctgctgcggc	480
tgctgcagag	ctgggtgtctg	tggactgtgc	tgcaaattct	gaggacctgc	cagca	535

<210> 159

<211> 277

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 159

aagatgaaga	cattcagtg	tgcaagtcaca	gtggccgctg	tgctcatctt	tatttgtatc	60
cagcagagct	ctgccacctc	tcctgaggtg	caagggctgg	aggaggcagt	gagcaatgac	120
aatgcagctg	ctgaacatca	ggagacatca	gtggactcgt	ggatgatgcc	atacaacaga	180
cagaagcgtg	gctttaagt	taagttctgc	tgcggctgct	gcaggcctgg	tgtctgtgga	240
ctttgctgca	gatcctgagg	attcctgtct	caacaac			277

<210> 160

<211> 542

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 160

aagatgaaga	cattcagtg	tgcaagtcaca	gtggccgctg	tgctcgtctt	tatttgtatc	60
cagcagagct	ctgccacctt	tcctgaggtg	agcacctgac	ttcagatcgt	ttcatttgct	120
tgtagcctt	gaatctctca	tcaacatact	gagacttgat	ttcttcttta	tcaggtacaa	180

```

gagctggagg aggcaagtga caatgacaat gcagctgctg aacatcagga gacatcagtg 240
gacttggtga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgccttg aagctcagtt tacacgagca 360
gagaaaacca acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
tctcacacag atgccatata acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
ctgctgcaga cctggtgtct gtggactttg ctgcagattc tgaggattcc tgctccaaca 540
ac

```

<210> 161

<211> 539

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 161

```

aagatgaaga cattcagtg tgcagtcaca gtggccgtcg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgtagcctt gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtaaca 180
gagctggagg aggcaagtga caatgacaat gcagctgctg aacatcagga gacatcagtg 240
gacttggtga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgccttg aagctcagtt tacacgagca 360
gagaaaacca acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
tctcacacag atgccatata acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
ctgctgcagt cctggtgtct gtggactttg ctgcagattc tgaggattcc tgctccaac 539

```

<210> 162

<211> 536

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 162

```

aagatgaaga cattcagtg tgcagtcaca gtggccgtcg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgtagcctt gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtaaca 180
gagctggagg aggcaagtga caatgacaat gcagctgctg aacatcagga gacatcagtg 240
gactcggtga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcctt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgccttg aagctcagtt tacacgagca 360
gagaaaacca acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
tctcacacag atgccatata acagacagaa gcgtggcttt aagtgttaagt tctgctgcgg 480
ctgctgcagt cctggtgtct gtggactttg ctgcaaattc tgaggacctg ccagca 536

```

<210> 163

<211> 536

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 163

```

aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt tatttgtatc 60
cagcagagct ctgccacctt tcctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgttagcctt gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtacaa 180
gagctggagg aggcagtgag caatgacaat gcagctgctg aacatcagga gacatcagt 240
gactcgtgga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgcctg aagctcagtt tacacgagca 360
gagaaaacaa acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
tctcacacag atgccataca acagacagaa gcgtggcctt aagtgttaagt tctgctgcgg 480
ctgctgcaga cctggtgtct gtggactttg ctgcaaattc tgaggacctg ccagca 536

```

<210> 164

<211> 271

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 164

```

aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt tatttgtatc 60
cagcagagct ctgccacctt tcctgaggta caagagctgg aggaggcagt gagcaatgac 120
aatgcagctg ctgaacatca ggagacatca gtggactcgt ggatgatgcc atacaacaga 180
cagaagcgtg gctttaagtg taagttctgc tgcggctgct gcagacctg tgtctgtgga 240
ctttgctgca aattctgagg acctgccagc a 271

```

<210> 165

<211> 277

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 165

```

aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt tatttgtatc 60
cagcagagct ctgccacctt tcctgaggta caagagctgg aggaggcagt gagcaatgac 120
aatgcagctg ctgaacatca ggagacatca gtggactcgt ggatgatgcc atacaacaga 180
cagaagcgtg gctttaagtg taagttctgc tgcggctgct gcaggcctg tgtctgtgga 240
ctttgctgca gattctgagg attcctgctc caacaac 277

```

<210> 166

<211> 499

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 166

```

aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt catttgtatc 60
cagcagagct ctgccacctt tcctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgttagcctt gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtacaa 180
gagctggagg aggcagtgag cagtgcacat gcagctgctg aacatcagga gacatcagt 240
gactcgtgga tggtaggttc agttcactga atgtgtttta gtcacaaaag tgccctgaag 300
ctcagtttac acaagcagag aaaacaaaca gagtaagtta tgatgatgct gatgaacgct 360

```

```

tcctcatgtc tcatgtctct cacacagatg ccatacaaca gacagaagcg tagctttaag 420
tgcaagttct gctgcggtcg ctgcagacgt ggtgtctgtg gactgtgctg caaattctga 480
ggattcctgc tccaacaac 499

```

<210> 167
 <211> 549
 <212> DNA
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Nucleotide
 sequence for hepcidin-like gene

```

<400> 167
aagatgaaga ctatcagtgt tgcagtcaca gtggccgctg tgctcctctt catttgtagc 60
cagcagagct ctgccacctt tcctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgtagcctt gaatctctca tcaacatact gagacttgat ttcttcttta tcaggtagaa 180
gagctggagg aggcagttag cagtgcacat gcggctgctg aacatcagga gacatcagtg 240
gactcgtgga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgcctcg aagctcagtt tacacaagca 360
gagaaaacaa acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
tcattgtctt cacacagatg ccatacaaca gacagaagcg tggctttaag tgcaagttct 480
gctgcggtcg ccgctgtggt gctctctgtg gactgtgctg caaattctga ggattcctgc 540
tccaacaac 549

```

<210> 168
 <211> 543
 <212> DNA
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Nucleotide
 sequence for hepcidin-like gene

```

<400> 168
aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt catttgtagc 60
cagcagagct ctgccacctt tcctgaggta agcacctgac ttcagatcgt ttcatttgct 120
tgtagcctt gaatctctca tcaacgtact gagacttgat ttcttcttta tcaggtagaa 180
gagctggagg agccagttag cagtgcacat gcagctgctg aacatcagga gacatcagtg 240
gactcgtgga tggtaggttc agttcactga atggatcaaa ccaattcaca tcagatcttt 300
cagatggaag tgaatgtgtt ttagtcacaa aagtgcctcg aagctcagtt tacacaagca 360
gagaaaacaa acacagtaag ttatgatgat gctgatgaac gtctcctcat gtctcatgtc 420
tcattgtctt cacacagatg ccatacaaca gacagaagcg tggctttaag tgcaagttct 480
gctgcggtcg ccgctgtggt gctctctgtg gactgtgctg caaattctga ggacctgcca 540
gca 543

```

<210> 169
 <211> 542
 <212> DNA
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Nucleotide
 sequence for hepcidin-like gene

```

<400> 169
aagatgaaga cattcagtgt tgcagtcaca gtggccgctg tgctcgtctt tatttggtcc 60
agcagagctc tgccaccttt cctgaggtaa gcacctgact tcagatcgtt tcatttgctt 120

```

```

gttagccttg aatctctcat caacatactg agacttgatt tcttctttat caggtacaag 180
agctggagga ggcagtgagc agtgacaatg cagctgctga acatcaggag acatcagtgg 240
actcgtggat ggtaggttca gttccctgaa tggatcaaac caattcacat cagatctttc 300
agatggaagt gaatgtgttt tagtcacaaa agtgccctga agctcagttt acacaagcag 360
agaaaacaaa cacagtaagt tatgatgatg ctgatgaaca tctcctcatg tctcatgtct 420
catgtctctc acacagatgc catacaacag acagaagcgt ggctttaagt gcaagttctg 480
ctgcggtctg cgctgtggtg ctctctgtgg actgtgctgc aaattctgag gacctgccag 540
ca 542

```

<210> 170

<211> 655

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 170

```

acgagctgac aggagctgac aggagtcacc agcagagtc aagaactaaa caacttaact 60
cagtcacaaat ctcaaagatg aagacattca gtgttgagc cacagtggcc gtcgtgctcg 120
tctttatttg tatccagcag agctctgcc cctttcctga ggtacaagag ctggaggagg 180
cagtgaacaa tgacaatgca gctgctgagc atcaggagac accagtggac tcagggatga 240
tgccaaacaa cagacagaag cgcagcgccg attgttgcc atgttgcaat caaaatggct 300
gtggaacttg ctgcaaggct taaacagact cttgggcaga tcaatccagg ttcgtctttc 360
gttgctctct cgtggagtcg aaccagagac cttctcagcc catagtccaa gtttctgcc 420
ctagaccacc gcctctccct catcaaatac tcaatgtttt tcattttgtc ttaaagttca 480
ttgaactata aacatatttc tggtagagca tgtgatagtt taatgggtgt actcattggt 540
tcatgggata gtcagatgtt cagagatgtg attatatcat ccacatattt tctctgttaa 600
ggtgtactgt caataaatgt caatgctcct ttgaaaaaaa aaaaaaaaaa aaaaac 655

```

<210> 171

<211> 510

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 171

```

cgtgctcgtc tttatttgta tccagcagag ctctgccacc tttcctgagg tgagctcctg 60
acttcagatc gtttcattta gcttggtatc catgaatctc tcatcaacat actgagactt 120
gaatccttct ttatcaggta caggagctgg aggaggcagt gagcaatgac aatgcagctg 180
ctgaacatca ggagacatca gtggactcat ggatgggatg ttcagttcac tgaatggatc 240
aaaccaatc acatcagatc tttcagatgg aagtgaattt gttttagtcc caaaagtgcc 300
ctgaagctca gtttacacaa gcagagaaaa acaaaacaca gtaagttatg atgatgctga 360
tgaacgtctc ctcatgtctc atgtctctca cacagatgcc atacaacaga cagaagcgca 420
gcgccagagt tagcttctgc tgcaatgaat ctggctgtgg aatttgctgc aaattctgag 480
gattcctgct ccaacaacaa gggcgaattc 510

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<210> 172

<211> 530

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide

sequence for hepcidin-like gene

<400> 172

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aagatgaaga cattcagtggt tgcagtcaca gtggccgctcg tgctcgtctt tatttgatc 60
cagcagagct ctgccacctt tctgaggtg agctcctgac ttcagatcgt ttcatttagc 120
ttgttatcca tgaatctctc atcaacatac tgagacttga atccttcttt atcaggtaca 180
ggagctggag gaggcagtga gcaatgacaa tgcagctgct gaacatcagg agacatcagt 240
ggactcatgg atggtatggt cagttcactg aatggatcaa accaattcac atcagatctt 300
tcagatggaa gtgaatttgt tttagtccca aaagtgcctt gaagctcagt ttacacaagc 360
agagaaaaac aaaacacagt aagttatgat gatgctgatg aacgtctcct catgtctcat 420
gtctctcaca cagatgccat acaacagaca gaagcgcagc gccgagtgtg gcttctgctg 480
caatgaatct ggctgtggaa tttgctgcaa attctgagga cctgccagca 530
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<210> 173

<211> 348

<212> DNA

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Nucleotide
sequence for hepcidin-like gene

<400> 173

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gtggaggagc cagtgagcag tgagaatgga gcaaataaac acacataaga tctttcggat 60
ggaagtgtat gtgttttagt cacatgagtg gctcgaagct cagtacacac gagcagagag 120
aacgaacaca gtgtgtttta tctgtcttgt gtaaactgag cttcagttta cacaagcaga 180
gaaaacaaac acagtaagtt atgatgatgc tgatgaacgt ctcctcatgt ctcatatctc 240
tcacacagat gccaaacaac agacagaagc gtggctctaa ttgcaaacca tgctgcaatc 300
ataatggctg tggaacgtgc tgcgaagtct gaggattcct gctccaca 348
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<210> 174

<211> 88

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 174

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Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val Leu Ala Cys
  1          5          10          15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
  20          25          30

Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
  35          40          45

Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
  50          55          60

Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
  65          70          75          80

Gly Cys Gly Phe Cys Cys Lys Phe
  85
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<210> 175
<211> 88
<212> PRT
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 175

Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val Leu Ala Cys
1 5 10 15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
20 25 30

Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
35 40 45

Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
50 55 60

Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
65 70 75 80

Gly Cys Gly Phe Cys Cys Lys Phe
85

<210> 176

<211> 86

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 176

Met Lys Ala Phe Ser Val Ala Val Val Leu Val Ile Ala Cys Met Phe
1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60

Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 177

<211> 58

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide sequence

<400> 177

Arg Thr Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln
1 5 10 15

Gln Pro Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys
20 25 30

Arg Gln Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His
35 40 45

Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
50 55

<210> 178

<211> 86

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide sequence

<400> 178

Met Lys Thr Phe Ser Val Ala Val Val Pro Val Ile Ala Cys Met Phe
1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln Ser His
50 55 60

Leu Ser Leu Cys Arg Trp Cys Phe Asn Cys Cys His Asn Lys Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 179

<211> 86

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide sequence

<400> 179

Met Lys Gln Phe Ser Val Ala Val Val Leu Val Met Ala Cys Met Phe
1 5 10 15

Ile Val Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
 20 25 30
 Val Gly Ser Leu Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
 35 40 45
 Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
 50 55 60
 Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
 65 70 75 80
 Gly Phe Cys Cys Lys Phe
 85

<210> 180
 <211> 90
 <212> PRT
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Hepcidin peptide
 sequence

<400> 180
 Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
 1 5 10 15
 Val Cys Ile Gln Cys Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
 20 25 30
 Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Glu His Gln Val
 35 40 45
 Met Ser Met Glu Ser Trp Met Glu Asn Pro Thr Arg Gln Lys Arg His
 50 55 60
 Ile Ser His Ile Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
 65 70 75 80
 Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
 85 90

<210> 181
 <211> 89
 <212> PRT
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Hepcidin peptide
 sequence

<400> 181
 Met Lys Thr Phe Ser Val Ala Val Ala Val Thr Leu Val Leu Ala Phe
 1 5 10 15
 Val Cys Ile Gln Asp Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
 20 25 30

Pro Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 184

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 184

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 185

<211> 58

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 185

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Met Pro Tyr Asn
20 25 30

Arg Gln Lys Arg Gly Phe Lys Cys Lys Phe Cys Cys Gly Cys Cys Gly
35 40 45

Ala Gly Val Cys Gly Met Cys Cys Lys Phe
50 55

<210> 186
<211> 83
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 186
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Pro Val Asp Ser Arg Ile Pro Tyr Asn Arg Gln Lys Arg Ser Phe Lys
50 55 60
Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu Cys
65 70 75 80
Cys Lys Phe

<210> 187
<211> 84
<212> PRT
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 187
Met Lys Thr Cys Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Lys Phe

<210> 188

<211> 84
<212> PRT
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 188

Met Lys Thr Ile Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Gly Met Ile Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 189
<211> 84
<212> PRT
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 189

Met Lys Thr Phe Ser Gly Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 190
<211> 84
<212> PRT
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 190

Met Lys Thr Ser Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Ala His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Lys Phe

<210> 191

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 191

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Lys Phe

<210> 192

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide

sequence

<400> 192

Met Lys Thr Phe Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 193

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 193

Met Lys Thr Ser Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Ala His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 194

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 194

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 195

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 195

Met Lys Thr Phe Ser Val Ala Val Ala Val Ala Val Val Leu Ile Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Leu Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 196

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 196

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
 20 25 30
 Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Ser Leu Asp Ser Trp Met Met Pro Tyr Asn Arg His Lys Arg Ser Phe
 50 55 60
 Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
 65 70 75 80
 Cys Cys Lys Phe

<210> 197
 <211> 84
 <212> PRT
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Hepcidin peptide
 sequence

<400> 197
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
 20 25 30
 Gly Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
 50 55 60
 Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
 65 70 75 80
 Cys Cys Lys Phe

<210> 198
 <211> 84
 <212> PRT
 <213> Unknown Organism

<220>
 <223> Description of Unknown Organism: Hepcidin peptide
 sequence

<400> 198
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Ile Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Thr Ser Pro Glu Val Gln Gly Leu
 20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Ser

<210> 199

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 199

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 200

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 200

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 201

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 201

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 202

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 202

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 203

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 203

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 204

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 204

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 205

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 205

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Ser Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Arg Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 206

<211> 84

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 206

Met Lys Thr Ile Ser Val Ala Val Thr Val Ala Val Val Leu Leu Phe
1 5 10 15

Ile Cys Thr Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Ser Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Arg Cys Gly Ala Leu Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 207
<211> 84
<212> PRT
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 207

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Pro Val Ser Ser Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Arg Cys Gly Ala Leu Cys Gly Leu
65 70 75 80
Cys Cys Lys Phe

<210> 208
<211> 84
<212> PRT
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 208

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Ser Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Arg Cys Gly Ala Leu Cys Gly Leu
65 70 75 80
Cys Cys Lys Phe

<210> 209
<211> 81

<212> PRT
<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 209

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Gly Met Met Pro Asn Asn Arg Gln Lys Arg Ser Ala
50 55 60

Asp Cys Trp Pro Cys Cys Asn Gln Asn Gly Cys Gly Thr Cys Cys Lys
65 70 75 80

Val

<210> 210

<211> 81

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 210

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Ala
50 55 60

Glu Cys Ser Phe Cys Cys Asn Glu Ser Gly Cys Gly Ile Cys Cys Lys
65 70 75 80

Phe

<210> 211

<211> 81

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Hepcidin peptide
sequence

<400> 211

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Ala
50 55 60

Glu Cys Ser Phe Cys Cys Asn Glu Ser Gly Cys Gly Ile Cys Cys Lys
65 70 75 80

Phe

<210> 212

<211> 88

<212> PRT

<213> Hippoglossus hippoglossus

<400> 212

Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val Leu Ala Cys
1 5 10 15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
20 25 30

Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
35 40 45

Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
50 55 60

Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
65 70 75 80

Gly Cys Gly Phe Cys Cys Lys Phe
85

<210> 213

<211> 88

<212> PRT

<213> Salmo salar

<400> 213

Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val Leu Ala Cys
1 5 10 15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
20 25 30

Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
35 40 45

Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
50 55 60

Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
65 70 75 80

Gly Cys Gly Phe Cys Cys Lys Phe
85

<210> 214

<211> 86

<212> PRT

<213> Salmo salar

<400> 214

Met Lys Ala Phe Ser Val Ala Val Val Leu Val Ile Ala Cys Met Phe
1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60

Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 215

<211> 58

<212> PRT

<213> Salmo salar

<400> 215

Arg Thr Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln
1 5 10 15

Gln Pro Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys
20 25 30

Arg Gln Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His
35 40 45

Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
50 55

<210> 216

<211> 86

<212> PRT

<213> Salmo salar

<400> 216

Met Lys Thr Phe Ser Val Ala Val Val Pro Val Ile Ala Cys Met Phe
1 5 10 15
Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30
Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45
Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln Ser His
50 55 60
Leu Ser Leu Cys Arg Trp Cys Phe Asn Cys Cys His Asn Lys Gly Cys
65 70 75 80
Gly Phe Cys Cys Lys Phe
85

<210> 217

<211> 86

<212> PRT

<213> Salmo salar

<400> 217

Met Lys Gln Phe Ser Val Ala Val Val Leu Val Met Ala Cys Met Phe
1 5 10 15
Ile Val Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30
Val Gly Ser Leu Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45
Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60
Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80
Gly Phe Cys Cys Lys Phe
85

<210> 218

<211> 90

<212> PRT

<213> Pleuronectes americanus

<400> 218

Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
1 5 10 15
Val Cys Ile Gln Cys Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
20 25 30
Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Glu His Gln Val
35 40 45

Met Ser Met Glu Ser Trp Met Glu Asn Pro Thr Arg Gln Lys Arg His
50 55 60

Ile Ser His Ile Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
65 70 75 80

Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
85 90

<210> 219

<211> 89

<212> PRT

<213> *Paralichthys olivaceus*

<400> 219

Met Lys Thr Phe Ser Val Ala Val Ala Val Thr Leu Val Leu Ala Phe
1 5 10 15

Val Cys Ile Gln Asp Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
20 25 30

Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Ala His Gln Met
35 40 45

Met Ser Met Glu Ser Trp Met Glu Ser Pro Val Arg Gln Lys Arg His
50 55 60

Ile Ser His Ile Ser Met Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
65 70 75 80

Lys Gly Cys Gly Pro Cys Cys Lys Phe
85

<210> 220

<211> 84

<212> PRT

<213> *Pleuronectes americanus*

<400> 220

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 221

<211> 84
<212> PRT
<213> Pleuronectes americanus

<400> 221

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Lys Phe

<210> 222
<211> 58
<212> PRT
<213> Pleuronectes americanus

<400> 222

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Met Pro Tyr Asn
20 25 30
Arg Gln Lys Arg Gly Phe Lys Cys Lys Phe Cys Cys Gly Cys Cys Gly
35 40 45
Ala Gly Val Cys Gly Met Cys Cys Lys Phe
50 55

<210> 223
<211> 83
<212> PRT
<213> Pleuronectes americanus

<400> 223

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Ala Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Pro Val Asp Ser Arg Ile Pro Tyr Asn Arg Gln Lys Arg Ser Phe Lys
50 55 60

Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu Cys
65 70 75 80

Cys Lys Phe

<210> 224

<211> 84

<212> PRT

<213> *Pleuronectes americanus*

<400> 224

Met Lys Thr Cys Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Ser Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 225

<211> 84

<212> PRT

<213> *Hippoglossoides platessoides*

<400> 225

Met Lys Thr Ser Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Ala His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 226

<211> 84

<212> PRT

<213> *Hippoglossoides platessoides*

<400> 226

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 227

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 227

Met Lys Thr Phe Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 228

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 228

Met Lys Thr Ser Val Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Ala His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 229

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 229

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 230

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 230

Met Lys Thr Phe Ser Val Ala Val Ala Val Ala Val Val Leu Ile Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Leu Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 231

<211> 84
<212> PRT
<213> Hippoglossoides platessoides

<400> 231

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Leu Asp Ser Trp Met Met Pro Tyr Asn Arg His Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 232

<211> 84

<212> PRT

<213> Hippoglossoides platessoides

<400> 232

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Gly Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Pro Lys Arg Ser Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Lys Phe

<210> 233

<211> 84

<212> PRT

<213> Salmo salar

<400> 233

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Ile Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Ser Pro Glu Val Gln Gly Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Ser

<210> 234

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 234

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 235

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 235

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 236
<211> 84
<212> PRT
<213> Hippoglossus hippoglossus

<400> 236
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Ser Pro Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Lys Phe

<210> 237
<211> 84
<212> PRT
<213> Hippoglossus hippoglossus

<400> 237
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Lys Phe

<210> 238
<211> 84
<212> PRT
<213> Hippoglossus hippoglossus

<400> 238
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
 20 25 30
 Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
 50 55 60
 Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
 65 70 75 80
 Cys Cys Lys Phe

<210> 239
 <211> 84
 <212> PRT
 <213> Hippoglossus hippoglossus

<400> 239
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
 20 25 30
 Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
 50 55 60
 Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
 65 70 75 80
 Cys Cys Arg Phe

<210> 240
 <211> 81
 <212> PRT
 <213> Pleuronectes americanus

<400> 240
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
 20 25 30
 Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Pro Val Asp Ser Gly Met Met Pro Asn Asn Arg Gln Lys Arg Ser Ala
 50 55 60
 Asp Cys Trp Pro Cys Cys Asn Gln Asn Gly Cys Gly Thr Cys Cys Lys
 65 70 75 80

Val

<210> 241
<211> 81
<212> PRT
<213> *Pleuronectes ferruginea*

<400> 241
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Ala
50 55 60
Glu Cys Ser Phe Cys Cys Asn Glu Ser Gly Cys Gly Ile Cys Cys Lys
65 70 75 80
Phe

<210> 242
<211> 81
<212> PRT
<213> *Pleuronectes ferruginea*

<400> 242
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Ser Ala
50 55 60
Glu Cys Ser Phe Cys Cys Asn Glu Ser Gly Cys Gly Ile Cys Cys Lys
65 70 75 80
Phe

<210> 243
<211> 27
<212> PRT
<213> *Glyptocephalus cynoglossus*

<400> 243

Met Pro Asn Asn Arg Gln Lys Arg Gly Ser Asn Cys Lys Pro Cys Cys
1 5 10 15

Asn His Asn Gly Cys Gly Thr Cys Cys Glu Val
20 25

<210> 244

<211> 67

<212> PRT

<213> Hippoglossoides platessoides

<400> 244

Met Lys Phe Thr Ala Thr Phe Leu Met Leu Phe Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Lys Ser Val Phe Arg Lys Ala Lys
20 25 30

Lys Val Gly Lys Thr Val Gly Gly Leu Ala Leu Asp His Tyr Leu Gly
35 40 45

Glu Gln Gln Glu Leu Asp Lys Arg Ala Val Asp Glu Asp Pro Ser Ile
50 55 60

Val Phe Asp
65

<210> 245

<211> 67

<212> PRT

<213> Hippoglossoides platessoides

<400> 245

Met Lys Phe Thr Ala Thr Phe Leu Met Leu Phe Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Lys Lys Trp Phe Asn Arg Ala Lys
20 25 30

Lys Val Gly Lys Thr Val Gly Gly Leu Ala Val Asp His Tyr Leu Gly
35 40 45

Lys Gln Pro Glu Leu Asp Lys Arg Ala Val Asp Glu Asp Pro Ser Ile
50 55 60

Val Phe Asp
65

<210> 246

<211> 66

<212> PRT

<213> Hippoglossoides platessoides

<400> 246

Met Lys Phe Thr Ala Asn Phe Leu Met Leu Phe Ile Phe Val Leu Met
1 5 10 15

Phe Glu Pro Gly Glu Cys Gly Trp Arg Thr Leu Leu Lys Lys Ala Glu

20 25 30
 Val Lys Thr Val Gly Lys Leu Ala Leu Lys His Tyr Leu Gly Lys Gln
 35 40 45
 Pro Glu Leu Asp Lys Arg Ala Ile Asp Asp Asp Pro Ser Ile Ile Val
 50 55 60
 Phe Asp
 65

<210> 247
 <211> 68
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 247
 Met Lys Phe Thr Ala Thr Phe Leu Met Ile Ala Ile Phe Val Leu Met
 1 5 10 15
 Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Phe Phe Lys Lys Ala Ala
 20 25 30
 His Val Gly Lys His Val Gly Lys Ala Ala Leu Thr His Tyr Leu Gly
 35 40 45
 Asp Lys Gln Glu Leu Asn Lys Arg Ala Val Asp Glu Asp Pro Asn Val
 50 55 60
 Ile Val Phe Glu
 65

<210> 248
 <211> 56
 <212> PRT
 <213> *Pleuronectes ferruginea*

<400> 248
 Met Lys Phe Thr Ala Thr Phe Leu Met Met Cys Ile Phe Val Leu Met
 1 5 10 15
 Val Glu Pro Gly Glu Cys Arg Trp Gly Lys Trp Phe Lys Lys Ala Thr
 20 25 30
 His Val Gly Lys His Val Gly Lys Ala Ala Leu Thr Ala Tyr Leu Gly
 35 40 45
 Asp Lys Gln Glu Leu Asp Lys Arg
 50 55

<210> 249
 <211> 68
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 249
 Met Lys Phe Thr Ala Thr Phe Leu Met Met Phe Ile Phe Val Leu Met
 1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Ile Phe Lys His Gly Arg
20 25 30

His Ala Ala Lys His Ile Gly His Ala Ala Val Asn His Tyr Leu Gly
35 40 45

Glu Gln Gln Asp Leu Asp Lys Arg Ala Val Asp Glu Asp Pro Asn Val
50 55 60

Ile Val Phe Glu
65

<210> 250

<211> 56

<212> PRT

<213> Glyptocephalus cynoglossus

<400> 250

Met Lys Phe Thr Ala Thr Phe Leu Met Met Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Ala Gly Trp Gly Ser Ile Phe Lys His Ile Phe
20 25 30

Lys Ala Gly Lys Phe Ile His Gly Ala Ile Gln Ala His Asn Asp Gly
35 40 45

Glu Glu Gln Asp Leu Asp Lys Arg
50 55

<210> 251

<211> 67

<212> PRT

<213> Glyptocephalus cynoglossus

<400> 251

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Phe Thr Lys Gly Ala
20 25 30

Lys His Leu Gly Gln Ala Ala Ile Asn Gly Leu Ala Ser Cys Glu Glu
35 40 45

Gln Gln Glu Leu Asp Lys Arg Ser Glu Asp Asp Glu Pro Ser Ala Ile
50 55 60

Val Phe Glu
65

<210> 252

<211> 67

<212> PRT

<213> Glyptocephalus cynoglossus

<400> 252

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
 1 5 10 15
 Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Leu Arg Lys Gly Ala
 20 25 30
 Lys His Leu Gly Gln Ala Ala Ile Lys Gly Leu Ala Ser Cys Glu Glu
 35 40 45
 Gln Gln Glu Leu Asp Lys Arg Ser Met Asp Asp Glu Pro Ser Ala Ile
 50 55 60
 Val Phe Asp
 65

<210> 253
 <211> 67
 <212> PRT
 <213> Glyptocephalus cynoglossus

<400> 253
 Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
 1 5 10 15
 Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Leu Arg Lys Gly Ala
 20 25 30
 Lys His Leu Gly Gln Ala Ala Ile Lys Gly Leu Ala Ser Cys Glu Glu
 35 40 45
 Gln Gln Glu Leu Asp Lys Arg Ser Met Asp Asp Glu Pro Ser Ala Ile
 50 55 60
 Val Phe Asp
 65

<210> 254
 <211> 67
 <212> PRT
 <213> Glyptocephalus cynoglossus

<400> 254
 Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
 1 5 10 15
 Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Phe Thr Lys Gly Ala
 20 25 30
 Lys His Leu Gly Gln Ala Ala Ile Asn Gly Leu Ala Ser Cys Glu Glu
 35 40 45
 Gln Gln Glu Leu Asp Lys Arg Ser Glu Asp Asp Glu Pro Ser Ala Ile
 50 55 60
 Val Phe Glu
 65

<210> 255

<211> 62
<212> PRT
<213> Glyptocephalus cynoglossus

<400> 255

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Gly Ser Gly Glu Cys Gly Trp Lys Lys Trp Phe Thr Lys Gly Glu
20 25 30

Arg Leu Ser Gln Arg His Phe Ala Asp Val Glu Gln Gln Glu Leu Asp
35 40 45

Lys Arg Ser Val Asp Asp Glu Pro Ser Ser Ile Ala Phe Asp
50 55 60

<210> 256

<211> 62

<212> PRT

<213> Glyptocephalus cynoglossus

<400> 256

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Gly Tyr Trp Arg Phe Arg Asn His Arg Gly Glu
20 25 30

Arg Leu Ser Gln Arg His Phe Ala Asp Val Glu Gln Gln Glu Leu Asp
35 40 45

Lys Arg Ser Val Asp Asp Glu Pro Ser Ser Ile Ala Phe Asp
50 55 60

<210> 257

<211> 65

<212> PRT

<213> Glyptocephalus cynoglossus

<400> 257

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Val Ile Val Met Phe Glu
1 5 10 15

Pro Gly Glu Cys Phe Gly Met Leu Phe His Arg Val His His Ala Gly
20 25 30

Arg Leu Ile His Arg Phe Ile Lys Arg His Gly Asp Val Glu Gln Gln
35 40 45

Glu Leu Asp Lys Arg Ser Val Asp Asp Glu Pro Ser Ser Ile Ala Phe
50 55 60

Ala
65

<210> 258

<211> 76

<212> PRT
<213> Glyptocephalus cynoglossus

<400> 258

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Asp Cys Ile Phe Gly Leu Ile Ala Thr Ala Val His
20 25 30

Asn Ala Gly Arg Leu Ile His Arg Leu Leu Gly Phe His His Gly Pro
35 40 45

Pro Gly Phe Trp His Gly Asp Val Glu Gln Gln Glu Leu Asp Lys Arg
50 55 60

Ser Val Asp Glu Glu Pro Ser Ala Ile Val Phe Glu
65 70 75

<210> 259

<211> 76

<212> PRT

<213> Glyptocephalus cynoglossus

<400> 259

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Asp Cys Ile Phe Gly Leu Ile Ala Thr Ala Val His
20 25 30

Asn Val Gly Arg Leu Val His Arg Leu Leu Gly Phe His His Gly Pro
35 40 45

Pro Gly Phe Trp His Gly Asp Val Glu Gln Gln Glu Leu Asp Lys Arg
50 55 60

Ser Val Asp Glu Glu Pro Ser Ala Ile Val Phe Glu
65 70 75

<210> 260

<211> 69

<212> PRT

<213> Pleuronectes americanus

<400> 260

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Ser Leu Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Cys Phe Leu Gly Ala Leu Ile Lys Gly Ala Ile
20 25 30

His Gly Gly Arg Phe Ile His Gly Met Ile Gln Asn His His Gly Tyr
35 40 45

Asp Glu Gln Gln Glu Leu Asp Lys Arg Ser Val Asp Asp Asn Pro Gly
50 55 60

Ala Ile Val Phe Asp

65

<210> 261
<211> 68
<212> PRT
<213> *Pleuronectes americanus*

<400> 261

Met Lys Leu Ala Ala Ala Phe Leu Val Leu Phe Leu Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Ser Phe Leu Gly Phe Leu Phe His Gly Ile Arg
20 25 30

His Gly Ile Lys Ala Ile His Gly Met Ile His Gly Asn Ser Leu Asp
35 40 45

Glu Met Gln Glu Leu Asp Lys Arg Ser Phe Asp Asp Asn Pro Asn Ala
50 55 60

Ile Val Phe Asp
65

<210> 262
<211> 68
<212> PRT
<213> *Pleuronectes ferruginea*

<400> 262

Met Lys Leu Ala Ala Ala Phe Leu Val Leu Phe Leu Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Gly Phe Leu Gly Phe Leu Phe His Gly Ile His
20 25 30

His Gly Ile Arg Ala Ile His His Leu Ile His Gly Gln Arg Tyr Asp
35 40 45

Glu Gln Gln Glu Leu Asp Lys Arg Ser Val Asp Asp Asn Pro Gly Ala
50 55 60

Ile Val Phe Asp
65

<210> 263
<211> 55
<212> PRT
<213> *Hippoglossus hippoglossus*

<400> 263

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Cys Phe Leu Gly Leu Leu Phe His Gly Val His
20 25 30

His Val Gly Lys Leu Ile His Gly Leu Ile His Gly Gly Tyr Asp Glu
35 40 45

Gln Gln Glu Leu Asp Lys Arg
50 55

<210> 264
<211> 57
<212> PRT
<213> Hippoglossus hippoglossus

<400> 264
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15
Ala Glu Pro Gly Glu Cys Phe Leu Gly Leu Leu Phe His Gly Val His
20 25 30
His Val Gly Lys Trp Ile His Gly Leu Ile His Gly His His Gly Tyr
35 40 45
Asp Glu Gln Gln Glu Leu Asp Lys Arg
50 55

<210> 265
<211> 61
<212> PRT
<213> Hippoglossus hippoglossus

<400> 265
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15
Ala Glu Pro Gly Glu Gly Phe Leu Gly Ile Leu Phe His Gly Val His
20 25 30
His Gly Arg Lys Lys Ala Leu His Met Asn Ser Glu Arg Arg Ser Tyr
35 40 45
Asp Glu Arg Gln Gln Gln Gln Glu Leu Asp Lys Arg
50 55 60

<210> 266
<211> 60
<212> PRT
<213> Hippoglossus hippoglossus

<400> 266
Met Lys Phe Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15
Ala Glu Pro Gly Glu Gly Leu Gly Asn Trp Met Gly Pro His Ile Ser
20 25 30
Gly Glu Lys Lys Ala Leu His Met Asn Ser Glu Arg Arg Ser Tyr Asp
35 40 45
Glu Arg Gln Gln Gln Gln Gln Glu Leu Asp Lys Arg
50 55 60

<210> 267
<211> 43
<212> PRT
<213> Glyptocephalus cynoglossus

<400> 267
Met Lys Leu Thr Ala Thr Phe Leu Val Leu Phe Met Val Val Leu Met
1 5 10 15
Ala Glu Pro Gly Glu Gly Phe Trp Gly Lys Leu Phe Lys Leu Gly Leu
20 25 30
His Gly Ile Gly Leu Leu His Leu His Leu Gly
35 40

<210> 268
<211> 67
<212> PRT
<213> Pleuronectes americanus

<400> 268
Met Lys Phe Ala Thr Ala Phe Leu Met Leu Ser Met Val Val Leu Met
1 5 10 15
Ala Glu Pro Gly Glu Cys Arg Ser Thr Glu Asp Ile Ile Lys Ser Ile
20 25 30
Ser Gly Gly Gly Phe Leu Asn Ala Met Asn Ala Gly Tyr Asn Glu Gln
35 40 45
Gln Glu Leu Asn Lys Arg Ser Asp Asp Asp Asp Ser Pro Ser Leu Ile
50 55 60
Val Phe Asp
65

<210> 269
<211> 68
<212> PRT
<213> Pleuronectes americanus

<400> 269
Met Lys Phe Thr Ala Thr Phe Leu Leu Leu Phe Ile Phe Val Leu Met
1 5 10 15
Val Asp Leu Gly Glu Gly Arg Arg Lys Arg Lys Trp Leu Arg Arg Ile
20 25 30
Gly Lys Gly Val Lys Ile Ile Gly Gly Ala Ala Leu Asp His Leu Gly
35 40 45
Gln Gly Gln Val Gln Gly Gln Asp Tyr Asp Tyr Gln Glu Gly Gln Glu
50 55 60
Leu Asn Lys Arg
65

<210> 270
<211> 98
<212> PRT
<213> Pleuronectes americanus

<400> 270

Met Lys Phe Thr Ala Thr Leu Leu Leu Leu Phe Ile Phe Val Leu Met
1 5 10 15

Val Asp Leu Gly Glu Gly Arg Arg Lys Lys Lys Gly Ser Lys Arg Lys
20 25 30

Gly Ser Lys Gly Lys Gly Ser Lys Gly Lys Gly Arg Trp Leu Asp Arg
35 40 45

Ile Gly Lys Ala Gly Gly Ile Ile Ile Gly Gly Ala Leu Asp His Leu
50 55 60

Gly Gln Gly Gln Val Gln Gly Pro Asp Tyr Asp Tyr Gln Glu Gly Glu
65 70 75 80

Glu Leu Asn Lys Arg Ser Asp Asp Asp Asp Ser Pro Ser Leu Ile Phe
85 90 95

Phe Asp

<210> 271
<211> 85
<212> PRT
<213> Pleuronectes americanus

<400> 271

Met Lys Phe Thr Ala Thr Phe Leu Leu Leu Phe Ile Phe Val Leu Met
1 5 10 15

Val Asp Leu Gly Glu Gly Arg Arg Lys Lys Lys Gly Ser Lys Arg Lys
20 25 30

Gly Ser Lys Gly Lys Gly Ser Lys Gly Lys Gly Arg Trp Leu Glu Arg
35 40 45

Ile Gly Lys Ala Gly Gly Ile Ile Ile Gly Gly Ala Leu Asp His Leu
50 55 60

Gly Gln Gly Gln Val Gln Gly Pro Asp Tyr Asp Tyr Gln Glu Gly Glu
65 70 75 80

Glu Leu Asn Lys Arg
85

<210> 272
<211> 728
<212> DNA
<213> Pleuronectes americanus

<220>
<221> CDS

<222> (153)..(252)

<220>

<221> CDS

<222> (483)..(513)

<220>

<221> CDS

<222> (615)..(687)

<400> 272

gaattcgccc ttgccactt tgtattcgca aggtaatatc aatatttttc aaattcattt 60

agacgagacc aaccttttgg gaaatctgct cagcttatta ctgtataatg caaatgttaa 120

tgatctttat ttttctgttt tttttttgta ga atg aag ttc act gcc acc ttc 173
Met Lys Phe Thr Ala Thr Phe
1 5

ctc atg atg ttc atc ttc gtc ctc atg gtt gaa cct gga gag tgt ggt 221
Leu Met Met Phe Ile Phe Val Leu Met Val Glu Pro Gly Glu Cys Gly
10 15 20

tgg gga agc att ttt aag cat ggt cgt cat g gtaaagtcac ggaattaatt 272
Trp Gly Ser Ile Phe Lys His Gly Arg His
25 30

agcttttaac ttgcaaata ttgttttttt ttttaacagc tggaaactca caaaaataaa 332

tagccgatat atttggccaa ttataatcac tttgatctaa ataacaacct aaaaggcctt 392

tgattagcat gtttcttcaa taaaatgatt gaacactact taaaggtatg tataaaacat 452

catcatgtgt ttttgtttgt ttttacacag ct gcc aag cat att ggc cat gca 505
Ala Ala Lys His Ile Gly His Ala
35 40

gcc gtt aa gtaaggactt ctaccattat tactgtataa tttgatagt attatcacca 563
Ala Val Asn

gtattgttat tgacaacttc tcttttttct gctgatccga ctcacccgca g t cat 618
His
45

tac ctt ggc gag cag caa gat ctc gac aag cgc gca gtc gat gaa gac 666
Tyr Leu Gly Glu Gln Gln Asp Leu Asp Lys Arg Ala Val Asp Glu Asp
50 55 60

cca aat gtt att gtt ttt gaa tgaagaaatc gccttgaagg agccttcaga 717
Pro Asn Val Ile Val Phe Glu
65

aggcggaatt c 728

<210> 273

<211> 68

<212> PRT

<213> *Pleuronectes americanus*

<400> 273

Met Lys Phe Thr Ala Thr Phe Leu Met Met Phe Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Ile Phe Lys His Gly Arg
20 25 30

His Ala Ala Lys His Ile Gly His Ala Ala Val Asn His Tyr Leu Gly
35 40 45

Glu Gln Gln Asp Leu Asp Lys Arg Ala Val Asp Glu Asp Pro Asn Val
50 55 60

Ile Val Phe Glu
65

<210> 274

<211> 60

<212> PRT

<213> *Pleuronectes americanus*

<400> 274

Met Lys Phe Thr Ala Thr Phe Leu Met Ile Ala Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Phe Phe Lys Lys Ala Ala
20 25 30

His Val Gly Lys His Val Gly Lys Ala Ala Leu Thr His Tyr Leu Gly
35 40 45

Asp Lys Gln Glu Leu Asn Lys Arg Ala Val Asp Glu
50 55 60

<210> 275

<211> 60

<212> PRT

<213> *Pleuronectes americanus*

<400> 275

Met Lys Phe Thr Ala Thr Phe Leu Met Met Phe Ile Phe Val Leu Met
1 5 10 15

Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Ile Phe Lys His Gly Arg
20 25 30

His Ala Ala Lys His Ile Gly His Ala Ala Val Asn His Tyr Leu Gly
35 40 45

Glu Gln Gln Asp Leu Asp Lys Arg Ala Val Asp Glu
50 55 60

<210> 276

<211> 61

<212> PRT

<213> *Pleuronectes americanus*

<400> 276

Met Lys Phe Thr Ala Thr Phe Leu Val Leu Ser Leu Val Val Leu Met
1 5 10 15

Ala Glu Pro Gly Glu Cys Phe Leu Gly Ala Leu Ile Lys Gly Ala Ile
20 25 30

His Gly Gly Arg Phe Ile His Gly Met Ile Gln Asn His His Gly Tyr
35 40 45

Asp Glu Gln Gln Glu Leu Asn Lys Arg Ala Val Asp Glu
50 55 60

<210> 277

<211> 72

<212> PRT

<213> *Pleuronectes americanus*

<400> 277

Met Lys Phe Thr Ala Thr Phe Leu Leu Leu Phe Ile Phe Val Leu Met
1 5 10 15

Val Asp Leu Gly Glu Gly Arg Arg Lys Arg Lys Trp Leu Arg Arg Ile
20 25 30

Gly Lys Gly Val Lys Ile Ile Gly Gly Ala Ala Leu Asp His Leu Gly
35 40 45

Gln Gly Gln Val Gln Gly Gln Asp Tyr Asp Tyr Gln Glu Gly Gln Glu
50 55 60

Leu Asn Lys Arg Ala Val Asp Glu
65 70

<210> 278

<211> 89

<212> PRT

<213> *Pleuronectes americanus*

<400> 278

Met Lys Phe Thr Ala Thr Phe Leu Leu Leu Phe Ile Phe Val Leu Met
1 5 10 15

Val Asp Leu Gly Glu Gly Arg Arg Lys Lys Lys Gly Ser Lys Arg Lys
20 25 30

Gly Ser Lys Gly Lys Gly Ser Lys Gly Lys Gly Arg Trp Leu Glu Arg
35 40 45

Ile Gly Lys Ala Gly Gly Ile Ile Ile Gly Gly Ala Leu Asp His Leu
50 55 60

Gly Gln Gly Gln Val Gln Gly Pro Asp Tyr Asp Tyr Gln Glu Gly Glu
65 70 75 80

Glu Leu Asn Lys Arg Ala Val Asp Glu
85

<210> 279

<211> 24
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 279

Met Trp Lys Asp Val Leu Lys Lys Ile Gly Thr Val Ala Leu His Ala
1 5 10 15

Gly Lys Ala Ala Leu Gly Ala Val
20

<210> 280

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 280

Ser Ile Gly Ser Ala Phe Lys Lys Ala Leu Pro Val Ala Lys Lys Ile
1 5 10 15

Gly Lys Ala Ala Leu Pro Ile Ala Lys
20 25

<210> 281

<211> 934

<212> DNA

<213> Unknown Organism

<220>

<221> CDS

<222> (186)..(266)

<220>

<221> CDS

<222> (676)..(771)

<220>

<223> Description of Unknown Organism: Type 1 salmonid hepcidin sequence

<220>

<221> CDS

<222> (361)..(441)

<400> 281

ctgacaccaa aagaacaatc aatcaacttt ggactcgtct tagtgattg aaaattgtgc 60

gttgagagc gtcgcttttt gggaacattg aagagttctg atcttcctca taaactgtca 120

cttcaatttc aactgatttc aacaggactt tttaataggc tataaacttc ctaaaaaaaaa 180

cgaga atg aag gcc ttt agt gtt gca gtg gta ctc gtc att gca tgt atg 230
 Met Lys Ala Phe Ser Val Ala Val Val Leu Val Ile Ala Cys Met
 1 5 10 15

ttc atc ctt gaa agc acc gct gtt cct ttc tcc gag gtatgtcaaa 276
 Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu
 20 25

ttctccaaca ccaaccctact acaaacatgt gtgcatcgat tttagagggtt ggatcatgact 336

catttggtgcc taatgtcttt gcag gtg cga acg gag gag gtt gga agc ttt 387
 Val Arg Thr Glu Glu Val Gly Ser Phe
 30 35

gac agt cca gtt ggg gaa cat caa cag ccg ggc ggc gag tcc atg cat 435
 Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly Glu Ser Met His
 40 45 50

ctg ccg gtacgttcaa ttgaatgaat gaattacgct aattaccttt agcaaattaa 491
 Leu Pro

catttttagtg gttgcgtttt accctcggaa tagaattaga tcagtagcgc tagctgttaa 551

ccatttgatt gtgagccgtt agagggcttc agggcgagca gtgtgcaacg tggttgtgaa 611

gtggagatat acttacttgc ttgttccctc cttttttcat attattttct tggcggggat 671

acag gag cct ttc agg ttc aag cgt cag atc cac ctc tcc ctg tgc ggt 720
 Glu Pro Phe Arg Phe Lys Arg Gln Ile His Leu Ser Leu Cys Gly
 55 60 65

ttg tgc tgc aac tgc tgt cac aac att ggc tgt ggc ttt tgc tgc aaa 768
 Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys Gly Phe Cys Cys Lys
 70 75 80 85

ttc taaggacctg cccgcaacat tttctagttt gtacatgttt gcaatgtttt 821
 Phe

ctttctgaga tgttgttttt gtgactatga taatgattta taaaatcact tcttattgtg 881

acactttaaa aaaaataaac acattctttg aataacaaaa aaaaaaaaaa aaa 934

<210> 282

<211> 86

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Type 1 salmonid
 hepcidin sequence

<400> 282

Met Lys Ala Phe Ser Val Ala Val Val Leu Val Ile Ala Cys Met Phe
 1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
 20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
 35 40 45

Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
 50 55 60

Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
 65 70 75 80

Gly Phe Cys Cys Lys Phe
 85

<210> 283

<211> 557

<212> DNA

<213> Unknown Organism

<220>

<221> CDS

<222> (11)...(178)

<220>

<221> CDS

<222> (423)...(518)

<220>

<223> Description of Unknown Organism: Type1 Hepcidin
 sequence

<400> 283

cgcccttaag atg aag aca ttc agt gtt gca gtt gca gtg gtg gtc gtc 49
 Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val
 1 5 10

ctc gca tgt atg ttc atc ctt gaa agc acc gct gtt cct ttc tcc gag 97
 Leu Ala Cys Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu
 15 20 25

gtg cga acg gag gag gtt gaa agc att gac agt cca gtt ggg gaa cat 145
 Val Arg Thr Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His
 30 35 40 45

caa cag ccg ggc ggc acg tcc atg aat ctg ccg gtacgttcaa tttagtgaat 198
 Gln Gln Pro Gly Gly Thr Ser Met Asn Leu Pro
 50 55

gaattaagta attaccttta gcaaattaac atctaagtgg ttgcgtttca ccttggaat 258

tgaattagcc cactagcgct agttgttaac catttgattg tgagccggtg gagagggctt 318

cagggcgagt agtgtgaata cttgtgaagt ggagacttgg acaaaaatac ttaccatgtg 378

cttggtccca cctttttcat tttcttttct tggctgagat acag atg cat ttc agg 434
 Met His Phe Arg
 60

ttc aag cgt cag agc cac ctc tcc ctg tgc cgt tgg tgc tgc aac tgc 482
 Phe Lys Arg Gln Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys
 65 70 75

tgt cac aac aag ggc tgt ggc ttc tgc tgc aaa ttc tgaggacctg 528

Cys His Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
80 85

ccagcaaagg gcgaattcgt ttaaaacac

557

<210> 284

<211> 88

<212> PRT

<213> Unknown Organism

<220>

<223> Description of Unknown Organism: Type1 Hepcidin
sequence

<400> 284

Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val Leu Ala Cys
1 5 10 15

Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
20 25 30

Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
35 40 45

Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
50 55 60

Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
65 70 75 80

Gly Cys Gly Phe Cys Cys Lys Phe
85

<210> 285

<211> 81

<212> PRT

<213> Pleuronectes americanus

<400> 285

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Pro Val Asp Ser Gly Met Met Pro Asn Asn Arg Gln Lys Arg Ser Ala
50 55 60

Asp Cys Trp Pro Cys Cys Asn Gln Asn Gly Cys Gly Thr Cys Cys Lys
65 70 75 80

Val

<210> 286
<211> 81
<212> PRT
<213> *Paralichthys olivaceus*

<400> 286

Met	Lys	Thr	Phe	Ser	Ala	Ala	Val	Thr	Val	Ala	Val	Val	Leu	Val	Phe
1				5				10					15		
Ile	Cys	Ile	Gln	Gln	Ser	Ser	Ala	Thr	Ser	Pro	Glu	Val	Gln	Glu	Leu
			20					25					30		
Glu	Glu	Ala	Val	Ser	Ser	Asp	Asn	Ala	Ala	Ala	Glu	His	Gln	Glu	Gln
		35					40					45			
Ser	Ala	Asp	Ser	Trp	Met	Met	Pro	Gln	Asn	Arg	Gln	Lys	Arg	Asp	Val
	50					55					60				
Lys	Cys	Gly	Phe	Cys	Cys	Lys	Asp	Gly	Gly	Cys	Gly	Val	Cys	Cys	Asn
65					70					75					80
Phe															

<210> 287
<211> 84
<212> PRT
<213> *Pleuronectes americanus*

<400> 287

Met	Lys	Thr	Phe	Ser	Val	Ala	Val	Thr	Val	Ala	Val	Val	Leu	Val	Phe
1				5				10					15		
Ile	Cys	Ile	Gln	Gln	Ser	Ser	Ala	Ser	Phe	Pro	Glu	Ala	Gln	Glu	Leu
			20					25					30		
Glu	Glu	Ala	Val	Ser	Asn	Asp	Asn	Ala	Ala	Ala	Glu	His	Gln	Glu	Thr
		35					40					45			
Pro	Val	Asp	Ser	Trp	Met	Met	Pro	Tyr	Asn	Arg	Gln	Lys	Arg	Ser	Phe
	50					55					60				
Lys	Cys	Lys	Phe	Cys	Cys	Gly	Cys	Cys	Arg	Ala	Gly	Val	Cys	Gly	Leu
65					70					75					80
Cys	Cys	Lys	Phe												

<210> 288
<211> 84
<212> PRT
<213> *Pleuronectes americanus*

<400> 288

Met	Lys	Thr	Phe	Ser	Val	Ala	Val	Thr	Val	Ala	Val	Val	Leu	Val	Phe
1				5				10					15		
Ile	Cys	Ile	Gln	Gln	Ser	Ser	Ala	Ser	Phe	Pro	Glu	Ala	Gln	Glu	Leu
			20					25					30		

Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Pro Val Asp Ser Trp Met Met Pro Asn Asn Arg Gln Lys Arg Gly Phe
 50 55 60
 Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Ala Gly Val Cys Gly Leu
 65 70 75 80
 Cys Cys Lys Phe

<210> 289
 <211> 58
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 289
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Met Pro Tyr Asn
 20 25 30
 Arg Gln Lys Arg Gly Phe Lys Cys Lys Phe Cys Cys Gly Cys Cys Gly
 35 40 45
 Ala Gly Val Cys Gly Met Cys Cys Lys Phe
 50 55

<210> 290
 <211> 84
 <212> PRT
 <213> *Pleuronectes americanus*

<400> 290
 Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
 1 5 10 15
 Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
 20 25 30
 Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
 35 40 45
 Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
 50 55 60
 Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
 65 70 75 80
 Cys Cys Lys Phe

<210> 291
 <211> 84
 <212> PRT

<213> Pleuronectes americanus

<400> 291

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Ile Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Ser Pro Glu Val Gln Gly Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Arg Ser

<210> 292

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 292

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45
Ser Val Asp Leu Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60
Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80
Cys Cys Arg Phe

<210> 293

<211> 84

<212> PRT

<213> Hippoglossus hippoglossus

<400> 293

Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Val Phe
1 5 10 15
Ile Cys Ile Gln Gln Ser Ser Ala Thr Phe Pro Glu Val Gln Glu Leu
20 25 30
Glu Glu Ala Val Ser Asn Asp Asn Ala Ala Ala Glu His Gln Glu Thr
35 40 45

Ser Val Asp Ser Trp Met Met Pro Tyr Asn Arg Gln Lys Arg Gly Phe
50 55 60

Lys Cys Lys Phe Cys Cys Gly Cys Cys Arg Pro Gly Val Cys Gly Leu
65 70 75 80

Cys Cys Arg Phe

<210> 294

<211> 86

<212> PRT

<213> Hippoglossus hippoglossus

<400> 294

Met Lys Thr Cys Gly Phe Ala Ala Ala Val Ala Val Leu Leu Thr Phe
1 5 10 15

Ile Cys Ile Gln Glu Gly Cys Ala Val Ser Val Ala Glu Glu Gln Val
20 25 30

Leu Lys Asp Pro Met Gly Asn Gly Asp Pro Gln Glu Val Pro Ala Glu
35 40 45

Ser Ser Gly Arg Gln Trp Met Met Pro Phe His Phe Arg Gln Arg Arg
50 55 60

Gly Ser Gly Pro Met Pro Cys Arg Gln Cys Cys His Cys Cys Pro Glu
65 70 75 80

Asn Gly Arg Val Tyr Val
85

<210> 295

<211> 85

<212> PRT

<213> Morone saxatilis

<400> 295

Met Lys Thr Phe Ser Val Ala Val Ala Val Ala Val Leu Ala Phe
1 5 10 15

Ile Cys Leu Gln Glu Ser Ser Ala Val Pro Val Thr Glu Val Gln Glu
20 25 30

Leu Glu Glu Pro Met Ser Asn Glu Tyr Gln Glu Met Pro Val Glu Ser
35 40 45

Trp Lys Met Pro Tyr Asn Asn Arg His Lys Arg His Ser Ser Pro Gly
50 55 60

Gly Cys Arg Phe Cys Cys Asn Cys Cys Pro Asn Met Ser Gly Cys Gly
65 70 75 80

Val Cys Cys Arg Phe
85

<210> 296
<211> 90
<212> PRT
<213> *Oryzias latipes*

<400> 296
Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
1 5 10 15
Ile Cys Ile Leu Gln Ser Ser Ala Ile Pro Val Asn Gly Val Lys Glu
20 25 30
Leu Glu Glu Ala Ala Ser Asn Asp Thr Pro Val Ala Ala Arg His Glu
35 40 45
Met Ser Met Gln Pro Trp Met Leu Pro Asn His Ile Arg Glu Lys Arg
50 55 60
Gln Ser His Ile Ser Met Cys Thr Met Cys Cys Asn Cys Cys Lys Asn
65 70 75 80
Tyr Lys Gly Cys Gly Phe Cys Cys Arg Phe
85 90

<210> 297
<211> 90
<212> PRT
<213> *Pleuronectes americanus*

<400> 297
Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
1 5 10 15
Val Cys Ile Gln Cys Ser Ser Ala Val Pro Phe Gln Gly Val Gln Glu
20 25 30
Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Glu His Gln Val
35 40 45
Met Ser Met Glu Ser Trp Met Glu Asn Pro Thr Arg Gln Lys Arg His
50 55 60
Ile Ser His Ile Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
65 70 75 80
Asn Lys Gly Cys Gly Phe Cys Cys Lys Phe
85 90

<210> 298
<211> 89
<212> PRT
<213> *Paralichthys olivaceus*

<220>
<221> MOD_RES
<222> (85)
<223> Variable amino acid

<400> 298

Met Lys Ala Phe Ser Ile Ala Val Ala Val Thr Leu Val Leu Ala Phe
 1 5 10 15
 Val Cys Ile Gln Asp Ser Ser Ala Ile Pro Phe Gln Gly Val Gln Glu
 20 25 30
 Leu Glu Glu Ala Gly Gly Asn Asp Thr Pro Val Ala Ala His Gln Met
 35 40 45
 Met Ser Met Glu Ser Trp Met Glu Ser Pro Val Arg Gln Lys Arg His
 50 55 60
 Ile Ser His Ile Ser Met Cys Arg Trp Cys Cys Asn Cys Cys Lys Ala
 65 70 75 80
 Lys Gly Cys Gly Xaa Cys Cys Lys Phe
 85

<210> 299
 <211> 88
 <212> PRT
 <213> Hippoglossus hippoglossus

<400> 299
 Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val Leu Ala Cys
 1 5 10 15
 Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
 20 25 30
 Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
 35 40 45
 Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
 50 55 60
 Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
 65 70 75 80
 Gly Cys Gly Phe Cys Cys Lys Phe
 85

<210> 300
 <211> 88
 <212> PRT
 <213> Salmo salar

<400> 300
 Met Lys Thr Phe Ser Val Ala Val Ala Val Val Val Val Leu Ala Cys
 1 5 10 15
 Met Phe Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr
 20 25 30
 Glu Glu Val Glu Ser Ile Asp Ser Pro Val Gly Glu His Gln Gln Pro
 35 40 45
 Gly Gly Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln
 50 55 60

Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn Cys Cys His Asn Lys
65 70 75 80

Gly Cys Gly Phe Cys Cys Lys Phe
85

<210> 301
<211> 86
<212> PRT
<213> Salmo salar

<400> 301
Met Lys Thr Phe Ser Val Ala Val Val Pro Val Ile Ala Cys Met Phe
1 5 10 15

Ile Leu Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30

Val Gly Ser Phe Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45

Thr Ser Met Asn Leu Pro Met His Phe Arg Phe Lys Arg Gln Ser His
50 55 60

Leu Ser Leu Cys Arg Trp Cys Phe Asn Cys Cys His Asn Lys Gly Cys
65 70 75 80

Gly Phe Cys Cys Lys Phe
85

<210> 302
<211> 61
<212> PRT
<213> Oncorhynchus mykiss

<220>
<221> MOD_RES
<222> (37)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (55)
<223> Variable amino acid

<400> 302
Leu Gln Val Leu Thr Glu Glu Val Gly Ser Ile Asp Ser Pro Val Gly
1 5 10 15

Glu His Gln Gln Pro Gly Gly Glu Ser Met Arg Leu Pro Glu His Phe
20 25 30

Arg Phe Lys Arg Xaa Ser His Leu Ser Leu Cys Arg Trp Cys Cys Asn
35 40 45

Cys Cys His Asn Lys Gly Xaa Gly Phe Cys Cys Lys Phe
50 55 60

<210> 303
<211> 86
<212> PRT
<213> Salmo salar

<400> 303

Met Lys Gln Phe Ser Val Ala Val Val Leu Val Met Ala Cys Met Phe
1 5 10 15
Ile Val Glu Ser Thr Ala Val Pro Phe Ser Glu Val Arg Thr Glu Glu
20 25 30
Val Gly Ser Leu Asp Ser Pro Val Gly Glu His Gln Gln Pro Gly Gly
35 40 45
Glu Ser Met His Leu Pro Glu Pro Phe Arg Phe Lys Arg Gln Ile His
50 55 60
Leu Ser Leu Cys Gly Leu Cys Cys Asn Cys Cys His Asn Ile Gly Cys
65 70 75 80
Gly Phe Cys Cys Lys Phe
85

<210> 304
<211> 84
<212> PRT
<213> Homo sapiens

<400> 304

Met Ala Leu Ser Ser Gln Ile Trp Ala Ala Cys Leu Leu Leu Leu Leu
1 5 10 15
Leu Leu Ala Ser Leu Thr Ser Gly Ser Val Phe Pro Gln Gln Thr Gly
20 25 30
Gln Leu Ala Glu Leu Gln Pro Gln Asp Arg Ala Gly Ala Arg Ala Ser
35 40 45
Trp Met Pro Met Phe Gln Arg Arg Arg Arg Arg Asp Thr His Phe Pro
50 55 60
Ile Cys Ile Phe Cys Cys Gly Cys Cys His Arg Ser Lys Cys Gly Met
65 70 75 80
Cys Cys Lys Thr

<210> 305
<211> 30
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Formula peptide

<220>

<221> MOD_RES

<222> (9)..(11)
<223> Variable amino acid; this region may encompass 1-3 Xaa repeats

<220>
<221> MISC_FEATURE
<222> (12)..(13)
<223> this region may encompass 0-2 Leu residues

<220>
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<222> (14)..(14)
<223> may or may not be present

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> may or may not be present

<220>
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<222> (17)..(17)
<223> Variable amino acid; may or may not be present

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Variable amino acid; may or may not be present

<220>
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<222> (22)..(22)
<223> may or may not be present

<220>
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<222> (23)..(23)
<223> may or may not be present

<220>
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<222> (24)..(24)
<223> may or may not be present

<220>
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<222> (25)..(25)
<223> may or may not be present

<220>
<221> MISC_FEATURE
<222> (26)..(26)
<223> may or may not be present

<220>
<221> MISC_FEATURE
<222> (29)..(29)
<223> may or may not be present

<220>
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<222> (30)..(30)

<223> may or may not be present

<220>

<223> see specification as filed for detailed description of preferred embodiments

<400> 305

Met	Lys	Phe	Thr	Ala	Thr	Phe	Leu	Xaa	Xaa	Xaa	Leu	Leu	Phe	Ile	Phe
1				5				10					15		

Xaa	Val	Leu	Met	Xaa	Val	Glu	Asp	Pro	Leu	Gly	Glu	Cys	Gly
		20						25					30

<210> 306

<211> 18

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Formula peptide

<220>

<221> MISC_FEATURE

<222> (1)..(1)

<223> may or may not be present

<220>

<221> MOD_RES

<222> (2)..(2)

<223> Variable amino acid; may or may not be present

<220>

<221> MOD_RES

<222> (3)..(4)

<223> Variable amino acid; this region may encompass 1-2 Xaa residues

<220>

<221> MISC_FEATURE

<222> (5)..(5)

<223> may or may not be present

<220>

<221> MOD_RES

<222> (6)..(8)

<223> Variable amino acid; this region may encompass 1-3 Xaa residues

<220>

<221> MISC_FEATURE

<222> (9)..(9)

<223> may or may not be present

<220>

<221> MISC_FEATURE

<222> (10)..(10)

<223> may or may not be present

<220>

<221> MOD_RES

<222> (12)..(12)

<223> Asn or Asp

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Ala or Ser

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Asp or Glu

<220>
<223> see specification as filed for detailed description of preferred embodiments

<400> 306
Tyr Xaa Xaa Xaa Glu Xaa Xaa Xaa Gln Glu Leu Xaa Lys Arg Xaa Val
1 5 10 15

Asp Xaa

<210> 307
<211> 14
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic signal peptide II

<220>
<221> MOD_RES
<222> (3)..(6)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (8)..(9)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (11)..(12)
<223> Variable amino acid

<400> 307
Met Lys Xaa Xaa Xaa Xaa Ala Xaa Xaa Val Xaa Xaa Val Leu
1 5 10

<210> 308
<211> 8
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic signal peptide III

<400> 308

Met Lys Thr Phe Ser Val Ala Val
1 5

<210> 309
<211> 24
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
signal peptide IV

<220>
<221> MOD_RES
<222> (15)..(15)
<223> Variable amino acid

<400> 309
Met Lys Thr Phe Ser Val Ala Val Thr Val Ala Val Val Leu Xaa Phe
1 5 10 15

Ile Cys Ile Gln Gln Ser Ser Ala
20

<210> 310
<211> 31
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
signal peptide V

<220>
<221> MOD_RES
<222> (11)..(11)
<223> Thr or Val

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Leu or Val

<220>
<221> MISC_FEATURE
<222> (16)..(16)
<223> may or may not be present

<220>
<221> MOD_RES
<222> (17)..(17)
<223> Val or Cys

<220>
<221> MOD_RES
<222> (18)..(18)
<223> Cys or Met

<220>

<221> MOD_RES
<222> (19)..(19)
<223> Ile or Phe

<220>
<221> MOD_RES
<222> (20)..(20)
<223> Gln or Ile

<220>
<221> MOD_RES
<222> (21)..(21)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (22)..(22)
<223> Variable amino acid; may or may not be present

<220>
<221> MOD_RES
<222> (24)..(24)
<223> Ser or Thr

<220>
<221> MOD_RES
<222> (29)..(30)
<223> Variable amino acid

<400> 310
Met Lys Thr Phe Ser Val Ala Val Ala Val Xaa Xaa Val Leu Ala Phe
1 5 10 15

Xaa Xaa Xaa Xaa Xaa Xaa Ser Xaa Ala Val Pro Phe Xaa Xaa Val
20 25 30

<210> 311
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
prosequence I peptide

<220>
<221> MOD_RES
<222> (5)..(5)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (12)..(12)
<223> Variable amino acid

<400> 311

Pro Glu Val Gln Xaa Leu Glu Glu Ala Xaa Ser Xaa Asp Asn Ala Ala
1 5 10 15

Ala Glu His Gln Glu
20

<210> 312

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
prosequence II peptide

<220>

<221> MOD_RES

<222> (3)..(4)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (6)..(6)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (7)..(7)

<223> Variable amino acid; may or may not be present

<220>

<221> MOD_RES

<222> (8)..(8)

<223> Leu or Thr

<220>

<221> MOD_RES

<222> (12)..(12)

<223> Glu or Gly

<220>

<221> MOD_RES

<222> (13)..(13)

<223> Gly or Ser

<220>

<221> MOD_RES

<222> (14)..(14)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (16)..(16)

<223> Thr or Ser

<220>

<221> MOD_RES

<222> (19)..(19)

<223> Ala or Gly

<220>

<221> MOD_RES

<222> (20)..(20)

<223> Variable amino acid

<400> 312

Pro Phe Xaa Xaa Val Xaa Xaa Xaa Glu Glu Val Xaa Xaa Xaa Asp Xaa
1 5 10 15

Pro Val Xaa Xaa His Gln
20

<210> 313

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 313

ggattcctgc tccaaca

17

<210> 314

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 314

taaggacctg cccgca

16

<210> 315

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
peptide

<220>

<221> MOD_RES

<222> (3)..(3)

<223> Gly or Lys

<220>

<221> MOD_RES

<222> (4)..(5)

<223> Variable amino acid

<220>

<221> MOD_RES
<222> (7)..(7)
<223> Variable amino acid

<400> 315
Gly Trp Xaa Xaa Xaa Phe Xaa Lys
1 5

<210> 316
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (2)..(8)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (10)..(10)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (12)..(13)
<223> Variable amino acid

<400> 316
Gly Xaa Xaa Xaa Xaa Xaa Xaa Xaa His Xaa Gly Xaa Xaa Ile His
1 5 10 15

<210> 317
<211> 19
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic peptide

<220>
<221> MOD_RES
<222> (11)..(12)
<223> Variable amino acid

<220>
<221> MOD_RES
<222> (17)..(17)
<223> Variable amino acid

<400> 317
Phe Lys Cys Lys Phe Cys Cys Gly Cys Cys Xaa Xaa Gly Val Cys Gly
1 5 10 15

Xaa Cys Cys

<210> 318

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD_RES

<222> (2)..(3)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (9)..(9)

<223> Lys or His

<220>

<221> MOD_RES

<222> (10)..(10)

<223> Variable amino acid

<400> 318

Cys Xaa Xaa Cys Cys Asn Cys Cys Xaa Xaa Lys Gly Cys Gly Phe Cys
1 5 10 15

Cys Lys Phe

<210> 319

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD_RES

<222> (13)..(14)

<223> Variable amino acid

<400> 319

Phe Lys Cys Lys Phe Cys Cys Gly Cys Arg Cys Gly Xaa Xaa Cys Gly
1 5 10 15

Leu Cys Cys Lys Phe
20

<210> 320

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<220>

<221> MOD_RES

<222> (1)..(3)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (5)..(6)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (10)..(11)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (15)..(15)

<223> Variable amino acid

<220>

<221> MOD_RES

<222> (19)..(19)

<223> Variable amino acid

<400> 320

Xaa Xaa Xaa Cys Xaa Xaa Cys Cys Asn Xaa Xaa Gly Cys Gly Xaa Cys
1 5 10 15

Cys Lys Xaa

<210> 321

<211> 6

<212> PRT

<213> *Pleuronectes americanus*

<400> 321

Trp Met Glu Asn Pro Thr
1 5

<210> 322

<211> 6

<212> PRT

<213> *Pleuronectes americanus*

<400> 322

Gly Cys Gly Phe Cys Cys
1 5

<210> 323

<211> 6

<212> PRT
<213> *Pleuronectes americanus*

<400> 323
Gly Arg Arg Lys Arg Lys
1 5

<210> 324
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 324
aagatgaaga cattcagtgt tgca 24

<210> 325
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 325
gttggttgag caggaatcc 19

<210> 326
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 326
tgctggcagg tcctcagaat ttgc 24

<210> 327
<211> 879
<212> DNA
<213> Unknown Organism

<220>
<223> Description of Unknown Organism: Nucleotide
sequence of pleurocidin-like gene

<400> 327
atgaagttca ctgccacctt cctcatgatt ttaatcttcg tcctcatggt cgaacctgga 60
gagtgtgggt gtaagaaatg gtttaaaaag gctgctcacg gtagagtcac ggaattaatt 120
tgctttttgc ttacaaata tttttttata gcagctggaa aatcacaaaa ataaatagtc 180
gatgtatttg gccaaattaga atcactttca tttcaataat aatctaaata gcaacctaaa 240


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aggcctttga ttagcatgtt ccttcaatga aatggatgtt gaggtttatt ttgattctca 300
catgcaccga cctgctgcg caacaattga attccaattt gtcccaaagg aattcaaagt 360
aaacttttct aggcgattta atctttccat aactcggcctt tgtttttaaa aatatataat 420
aactcaatcc ctatgataaa ataataacac atacattctg atttatacaa gacaagattg 480
aaaactttctt gaaagtatgt atcaaacatc atctgtttgt ataattgttt aacatttcac 540
aaaaagtcca actaattgtg ttatggaatt gtataaattg tcatttaata taattttttt 600
gagtttatca atatgtgttt ttgtttgttt tacacagttg gcaagaacgt tggcaagggtg 660
gcccttaagt aaggacttct accattatta ctgtataatt ttgatagtat tatcaccagt 720
actgttattg acaacttctc ttttcctgct gactctctcc atccgactca tctgcagtgc 780
ttaccttggt gagcagcagc agctcgacaa gcgtgcagtc gatgaagagc ccagtgttat 840
tgcttttgac tgaagaagtc gccttgaagg agccttcag 879

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<210> 328
 <211> 335
 <212> DNA
 <213> *Pleuronectes americanus*

<220>
 <221> CDS
 <222> (27)..(230)

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<400> 328
acaaagccca ctttgtattc gcaaga atg aag ttc act gcc acc ttc ctc atg 53
Met Lys Phe Thr Ala Thr Phe Leu Met
1 5

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atg gcc atc ttc gtc ctc atg gtt gaa cct gga gag tgt ggc tgg gga 101
Met Ala Ile Phe Val Leu Met Val Glu Pro Gly Glu Cys Gly Trp Gly
10 15 20 25

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agc ttt ttt aaa aag gct gct cac gtt ggc aag cat gtt ggc aag gcg 149
Ser Phe Phe Lys Lys Ala Ala His Val Gly Lys His Val Gly Lys Ala
30 35 40

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gcc ctt act cat tac ctt ggc gat aag cag gag ctc aac aag cgt gca 197
Ala Leu Thr His Tyr Leu Gly Asp Lys Gln Glu Leu Asn Lys Arg Ala
45 50 55

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gtc gat gaa gac cca aat gtt att gtt ttt gaa tgaagaaatc gccttgaagg 250
Val Asp Glu Asp Pro Asn Val Ile Val Phe Glu
60 65

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agccttcaga tgatatataa tccttcttgc ttttaatgaa ataaatcaga cttttacctg 310
caacagcaaa aaaaaaaaaa aaaaa 335

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<210> 329
 <211> 68
 <212> PRT
 <213> *Pleuronectes americanus*

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<400> 329
Met Lys Phe Thr Ala Thr Phe Leu Met Met Ala Ile Phe Val Leu Met
1 5 10 15
Val Glu Pro Gly Glu Cys Gly Trp Gly Ser Phe Phe Lys Lys Ala Ala
20 25 30

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His Val Gly Lys His Val Gly Lys Ala Ala Leu Thr His Tyr Leu Gly
35 40 45

Asp Lys Gln Glu Leu Asn Lys Arg Ala Val Asp Glu Asp Pro Asn Val
50 55 60

Ile Val Phe Glu
65

<210> 330

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 330

Phe Leu Gly Phe Leu Phe His Gly Ile His His Gly Ile Arg Ala Ile
1 5 10 15

His Leu Ile His Gly
20

<210> 331

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 331

Phe Phe Gly Ala Leu Ile Lys Gly Ala Ile His Gly Gly Lys Leu Leu
1 5 10 15

His Lys Leu Ile Lys Lys Lys His Glu His His Gly Tyr Gly Lys His
20 25 30

Trp Gly

<210> 332

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 332

Phe Leu Gly Phe Leu Phe His Gly Ile Arg His Gly Ile Lys Ala Ile
1 5 10 15

His Gly Met Ile His Gly
20

<210> 333
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 333
Gly Lys Gly Arg Trp Leu Glu Arg Ile Gly Lys Ala Gly Gly Ile Ile
1 5 10 15

Ile Gly Gly Ala Leu Asp His Leu Gly
20 25

<210> 334
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 334
Gly Leu Gly Asn Trp Met Gly Pro His Ile Ser Gly Glu Lys Lys Ala
1 5 10 15

Leu His Met Asn Ser Glu Arg Arg Ser
20 25

<210> 335
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 335
Gly Leu Gly Asn Trp Ile Val Arg Pro Ile Gly Gly Glu Lys Lys Ala
1 5 10 15

Leu Gln Met Asn Ser Glu Arg Arg Ser
20 25

<210> 336
<211> 35
<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 336

Leu Phe Gly Lys Phe Leu Lys Lys Val Val His Ala Gly Thr Ser Ile
1 5 10 15

Gly Glu Thr Ala Leu His Val Ala Ala Glu His His Gly Leu His Ala
20 25 30

His His Gly
35

<210> 337

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 337

Gly Leu Gly Asn Trp Met Gly Pro His Ile Ser Gly Arg Lys Lys Ala
1 5 10 15

Leu His Met Asn Ser Glu Arg Arg Ser
20 25

<210> 338

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 338

Phe Leu Gly Leu Leu Phe His Gly Val His His Val Gly Lys Leu Ile
1 5 10 15

His Gly Leu Ile His Gly
20

<210> 339

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 339

Ala Arg Trp Gly Thr Phe Phe Lys His Ile Phe Lys Ala Gly Arg Phe
1 5 10 15

Ile His Gly Ala Ile Gln Ala His Asn Asp Gly
20 25

<210> 340

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 340

Ala Trp Ile Pro Ala Leu Asn Arg Ile Tyr His Gly Ala Leu Leu Arg
1 5 10 15

Ile Asn Arg Gln Met Val Tyr Tyr Arg Arg His Trp His Gly
20 25 30

<210> 341

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 341

Ala Trp Met Pro Ala Leu Asn Arg Ile Tyr His Gly Ala Leu Leu Arg
1 5 10 15

Ile Asn Arg Gln Met Val Tyr Tyr Arg Arg His Trp His Gly
20 25 30

<210> 342

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 342

Gly Trp Lys Lys Trp Phe Thr Lys Gly Ala Lys His Leu Gly Gln Ala
1 5 10 15

Ala Ile Asn Gly Leu Ala Ser
20

<210> 343

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 343

Gly Trp Lys Lys Trp Leu Arg Lys Gly Ala Lys His Leu Gly Gln Ala
1 5 10 15

Ala Ile Lys Gly Leu Ala Ser
20

<210> 344

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 344

Phe Gly Asp Phe Tyr Met Lys Pro Gly Arg Lys Ile Ser His Gly Tyr
1 5 10 15

Ile Arg Ser Pro Tyr Gly
20

<210> 345

<211> 19

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 345

Gly Tyr Trp Arg Phe Arg Asn His Arg Gly Glu Arg Leu Ser Gln Arg
1 5 10 15

His Phe Ala

<210> 346

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 346

Phe Gly Met Leu Phe His Arg Val His His Ala Gly Arg Leu Ile His
1 5 10 15

Arg Phe Ile Lys Arg His Gly
20

<210> 347
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 347
Ile Phe Gly Leu Ile Ala Thr Ala Val His Asn Ala Gly Arg Leu Ile
1 5 10 15
His Arg Leu Leu Gly Phe His His Gly Pro Pro Gly Phe Trp His Gly
20 25 30

<210> 348
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 348
Ile Phe Gly Leu Ile Ala Thr Ala Val His Asn Val Gly Arg Leu Val
1 5 10 15
His Gly Leu Leu Gly Phe His His Gly Pro Pro Gly Phe Trp His Gly
20 25 30

<210> 349
<211> 32
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 349
Ile Phe Gly Leu Ile Ala Thr Ala Val His Asn Val Gly Arg Leu Val
1 5 10 15
His Gly Leu Leu Gly Phe His His Gly Pro Pro Arg Phe Trp His Gly
20 25 30

<210> 350
<211> 34
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 350

Phe Phe Gly Met Arg Phe His Gly Val His His Ala Gly Gly Gly Phe
1 5 10 15

Leu Asn Ala Gln Gly Leu Leu Pro Ser Leu Leu Leu Asn Pro Gly Tyr
20 25 30

Arg Gly

<210> 351

<211> 22

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 351

Phe Phe Gly Ala Leu Leu Lys Gly Ala Gln Ala Leu His Gly Ile Ile
1 5 10 15

His Asn Ala Arg His Gly
20

<210> 352

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 352

Gly Trp Lys Asp Trp Phe Arg Lys Ala Lys Lys Val Gly Lys Thr Val
1 5 10 15

Gly Gly Leu Ala Leu Asn His Tyr Leu Gly
20 25

<210> 353

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 353

Gly Ile Arg Lys Trp Phe Lys Lys Ala Ala His Val Gly Lys Glu Val
1 5 10 15

Gly Lys Val Ala Leu Asn Ala Cys Leu
20 25

<210> 354
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 354
Gly Leu Lys Lys Trp Phe Lys Lys Ala Val His Val Gly Lys Lys Val
1 5 10 15

Gly Lys Val Ala Leu Asn Ala Tyr Leu Gly
20 25

<210> 355
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 355
Gly Trp Arg Lys Trp Ile Lys Lys Ala Thr His Val Gly Lys His Ile
1 5 10 15

Gly Lys Ala Ala Leu Asp Ala Tyr Ile Gly
20 25

<210> 356
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 356
Gly Cys Lys Lys Trp Phe Lys Lys Ala Ala His Val Gly Lys Asn Val
1 5 10 15

Gly Lys Val Ala Leu Asn Ala Tyr Leu Gly
20 25

<210> 357
<211> 26
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 357

Gly Ile Arg Lys Trp Phe Lys Lys Ala Ala His Val Gly Lys Lys Val
1 5 10 15

Gly Lys Val Ala Leu Asn Ala Tyr Leu Gly
20 25

<210> 358

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 358

Trp Leu Glu Arg Lys Trp Phe Lys Lys Ala Thr His Val Gly Lys His
1 5 10 15

Val Gly Lys Ala Ala Leu Asp Ala Tyr Leu Gly
20 25

<210> 359

<211> 23

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 359

Phe Phe Gly Leu Leu Phe His Gly Ile His His Ala Gly Lys Leu Ile
1 5 10 15

His Gly Leu Ile His His Gly
20

<210> 360

<211> 24

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 360

Leu Gly Asn Trp Met Gly Pro His Ile Ser Gly Arg Lys Lys Ala Leu
1 5 10 15

Gln Met Asn Ser Glu Arg Arg Ser
20

<210> 361

<211> 23

<212> PRT
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 361

Phe Leu Gly Leu Leu Phe His Gly Val His His Val Gly Asn Leu Ile
1 5 10 15

His Gly Leu Ile His His Gly
20

<210> 362

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
pleurocidin-like peptide

<400> 362

Gly Ile Arg Lys Trp Phe Lys Lys Ala Ala His Val Gly Lys Lys Val
1 5 10 15

Gly Lys Val Ala Leu Asn Ala Tyr Leu Gly
20 25